TAPR Announcement List Archive, June 1994 through April 2003

June 1994 through April 2003

TAPR's announcement list, carrying organizational and technical news, project and software announcements, regulatory information, conference news, and other material of interest to the amateur digital-radio community.

This volume contains 79 original monthly files and 341 messages, arranged chronologically. The PDF is a readable access copy: MIME transfer encodings are decoded, HTML bodies are converted to plain text, and non-text attachments are represented by descriptive notes. The raw source text is supplied separately with the Internet Archive item.

Month	Messages	Original source file
1994-06	14	tapr-bb.9406
1994-07	4	tapr-bb.9407
1994-08	3	tapr-bb.9408
1994-09	10	tapr-bb.9409
1994-10	6	tapr-bb.9410
1994-11	6	tapr-bb.9411
1994-12	9	tapr-bb.9412
1995-01	7	tapr-bb.9501
1995-02	13	tapr-bb.9502
1995-03	4	tapr-bb.9503
1995-04	3	tapr-bb.9504
1995-05	6	tapr-bb.9505
1995-06	2	tapr-bb.9506
1995-07	7	tapr-bb.9507
1995-08	8	tapr-bb.9508
1995-09	4	tapr-bb.9509
1995-10	2	tapr-bb.9510
1995-11	5	tapr-bb.9511
1995-12	5	tapr-bb.9512
1996-01	5	tapr-bb.9601
1996-02	2	tapr-bb.9602
1996-03	11	tapr-bb.9603
1996-04	13	tapr-bb.9604
1996-06	6	tapr-bb.9606
1996-07	5	tapr-bb.9607
1996-08	8	tapr-bb.9608
1996-09	13	tapr-bb.9609
1996-10	6	tapr-bb.9610
1996-11	2	tapr-bb.9611

Month	Messages	Original source file
1996-12	11	tapr-bb.9612
1997-01	7	tapr-bb.9701
1997-02	8	tapr-bb.9702
1997-03	15	tapr-bb.9703
1997-04	6	tapr-bb.9704
1997-05	6	tapr-bb.9705
1997-06	6	tapr-bb.9706
1997-07	2	tapr-bb.9707
1997-08	2	tapr-bb.9708
1997-09	5	tapr-bb.9709
1997-10	4	tapr-bb.9710
1997-11	4	tapr-bb.9711
1997-12	4	tapr-bb.9712
1998-01	3	tapr-bb.9801
1998-02	2	tapr-bb.9802
1998-03	2	tapr-bb.9803
1998-04	1	tapr-bb.9804
1998-05	7	tapr-bb.9805
1998-06	2	tapr-bb.9806
1998-07	2	tapr-bb.9807
1998-08	2	tapr-bb.9808
1998-09	1	tapr-bb.9809
1998-11	1	tapr-bb.9811
1998-12	1	tapr-bb.9812
1999-01	5	tapr-bb.9901
1999-02	3	tapr-bb.9902
1999-03	3	tapr-bb.9903
1999-04	4	tapr-bb.9904
1999-05	4	tapr-bb.9905
1999-06	1	tapr-bb.9906
1999-07	1	tapr-bb.9907
1999-10	3	tapr-bb.9910
1999-12	2	tapr-bb.9912
2000-05	1	tapr-bb.0005
2000-07	1	tapr-bb.0007
2000-09	2	tapr-bb.0009
2001-02	1	tapr-bb.0102
2001-04	1	tapr-bb.0104
2001-05	1	tapr-bb.0105
2001-07	1	tapr-bb.0107
2001-08	1	tapr-bb.0108
2001-09	4	tapr-bb.0109
2002-02	1	tapr-bb.0202
2002-04	2	tapr-bb.0204
2002-05	1	tapr-bb.0205

Month	Messages	Original source file
2002-08	1	tapr-bb.0208
2002-11	1	tapr-bb.0211
2003-02	1	tapr-bb.0302
2003-03	1	tapr-bb.0303
2003-04	1	tapr-bb.0304

June 1994

Original source file: tapr-bb.9406
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1994-06/TAPR-BB_1994-06.txt

1. FCC HF Digital NPRM

From: Greg Jones <gjones@tenet.edu>
Date: Thu, 30 Jun 1994 13:29:49 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing)
Message-ID: <199406301829.NAA03579@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

Before the
Federal Communications Commission
Washington, D.C. 20554

PR Docket No. 94-59
RM-8218
RM-8280

In the Matter of

Amendment of Part 97 of the
Commission's Rules Concerning
HF Digital Communications in the
Amateur Service.

NOTICE OF PROPOSED RULE MAKING

Adopted: June 13, 1994
Released: June 23, 1994

Comment Date: October 1, 1994
Reply Comment Date: November 1, 1994

By the Commission: Commissioners Ness and Chong not participating.

I. INTRODUCTION

1. In this Notice of Proposed Rule Making (Notice), we propose to amend the amateur service rules to authorize automatic control[1] of stations transmitting a digital emission on the High Frequency (HF) amateur service bands.[2] This proceeding was initiated by two petitions for rule making.[3]

Il. BACKGROUND

2. The propagation characteristics of the HF bands[4] allow for long distance communications. Amateur operators take advantage of these characteristics to communicate with other amateur stations, particularly with those in other countries. Establishing and maintaining a HF communications link, however, presents operating demands not encountered on the Very-High Frequency (VHF) and higher frequency bands frequencies above 30 MHz. The variables affecting communications in the HF bands are highly complex. To maintain the communications link and avoid causing interference to the communications of other amateur stations, the control operator constantly monitors the activity on the channel being used and adjusts the station's transmitting parameters as needed. Because the presence of the control operator has been imperative for proper operation in such systems, automatic control of an amateur station that is transmitting on an HF band has not been authorized.[5]

3. In 1986, however, automatic control of amateur stations transmitting digital communications[6] on the VHF and higher frequency bands was authorized.[7] In the same proceeding, the Commission indicated an interest in also authorizing automatic control of amateur stations transmitting digital communications in the HF band. In this regard, the Commission noted that a feasibility study planned by The American Radio Relay League, Inc. (ARRL) would be helpful in determining if any rule

changes were necessary to prevent interference to and from other amateur service communication.[8] The ARRL's petition is the result of that study.

Ill. DISCUSSION

4. According to the ARRL, its project was carried out under Special Temporary Authority we granted to some fifty amateur stations. It states that these stations were assembled as an automated digital communication system on the 20 meter HF band based upon the packet radio protocol used generally by amateur stations on the VHF bands.[9] Based on the experience gained managing this system, the ARRL concludes that the only regulatory safeguard needed to prevent interference to other stations is to restrict those stations that engage in automatically controlled station transmissions to specific subbands within the eight HF bands where data and RTTY emission types may be transmitted. The ARRL believes that this approach will provide advance notice to other amateur operators that they may receive interference to their communications from automatically controlled stations should they attempt to operate their stations in these subbands.[10] The ARRL recommends that the subbands be those it has coordinated with other amateur radio societies in North and South America.[11]

5. In its petition, the American Digital Radio Society (ADRS) states that it also believes that automatic control in the HF bands is workable[12] as long as proper safeguards for other users of these bands are included.[13] It agrees that communications between automatically controlled stations should be confined to the ARRL-recommended subbands.[14] The ADRS also recommends, however, that communications between a locally or remotely controlled station and an automatically controlled station should be permitted on any frequency authorized for data and RTTY emission types.[l5] It argues that the potential for interference is much less from stations operating in this configuration because the control operator of the locally or remotely controlled station can terminate the transmissions from all the stations. In its comments, the ARRL supported the ADRS petition.[16]

6. We are gratified by the cooperation and dedication of organizations within the amateur service community in determining the conditions necessary to allow automatic control of stations transmitting data and RTTY emission types on the HF amateur service bands. We concur with the petitioners that automatic control of amateur stations in the HF bands can, with the safeguards recommended. make the transmission of data and RTTY emission types practical and effective.[17] Also like the petitioners, we believe that the potential for interference to the communications of other amateur stations will be mitigated by rules based upon their recommendations. We propose, therefore, to authorize automatic control for stations transmitting data and RTTY emission types on the subbands recommended by the ARRL. We also propose to authorize communications between a locally or remotely controlled station and an automatically controlled station on any frequency where data and RTTY emission types are otherwise authorized.[18] These proposed rules are intended to facilitate the development of digital communications on the HF amateur service bands. We request comments on these proposals.

IV. CONCLUSION

7. We firmly believe in the principle that government should be responsive to user needs.[19] The rules that we are proposing are the result of a successful feasibility project planned and carried out within the amateur service community. They are responsive to the recommendations of two organizations dedicated to bringing the benefits to be derived from the transmission of digital communications on the amateur service HF bands to amateur operators in the United States and elsewhere without causing unnecessary interference to other types of communications.

V. PROCEDURAL MATTERS

Ex Parte Rules - Non-Restricted Proceeding

8. This is a non-restricted notice and comment rule making proceeding. Ex parte presentations are permitted, except during the Sunshine Agenda period, provided they are disclosed as provided in Commission Rules. See generally 47 C.F.R. 1.1202, 1.1203, and 1.1206(a).

Regulatory Flexibility Act

9. We certify that the Regulatory Flexibility Act of 1980 does not apply to this rule making proceeding because if the proposed rule amendments are promulgated, there will not be any significant economic impact on small business entities, as defined by Section 601(3) of the Regulatory Flexibility Act. The amateur service may not be used to transmit communications for compensation, for the pecuniary benefit of the station control operator or the station control operator's employer, or for business communications on a regular basis. See 47 C.F.R. 97.113(a). The Secretary shall send a copy of this Notice of Proposed Rule Making, including the certification, to the Chief Counsel for Advocacy of the Small Business Administration in accordance with paragraph 605(b) of the Regulatory Flexibility Act, Pub. L. No. 96-354, 94 Stat. 1164, 5 U.S.C. 601-612 (1981).

Comment Dates

10. Authority for issuance of this Notice is contained in Sections 4(i), 303(b), 303(g), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 303(b), (g), and (r). Pursuant to applicable procedures set forth in Sections 1.415 and 1.419 of the Commission's Rules, 47 C.F.R. 1.415 and 1.419, interested parties may file comments on or before October 1, 1994, and reply comments on or before November 1, 1994. To file formally in this proceeding, you must file an original and five copies of all comments, and reply comments. To file informally, you must file an original and one copy of your comments, provided only that the Docket Number is specified in the heading. You should send comments and reply comments to: Office of the Secretary, Federal Communications Commission, Washington, D.C. 20554. Comments and reply comments will be available for public inspection during regular business hours in the FCC Reference Center (Room 239) of the Federal Communications Commission, 1919 M Street, N. W., Washington, D.C. 20554.

11. For further information, contact William T. Cross, Personal Radio Branch, Private Radio Bureau, (202) 632-4964.

FEDERAL COMMUNICATIONS COMMISSION

William F. Caton
Acting Secretary

APPENDIX

Part 97 of Chapter I of Title 47 of the Code of Federal Regulations is proposed to be amended as follows:

1. The authority citation for Part 97 would continue to read as follows:

Authority citation: 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303. Interpret or apply 48 Stat. 1064-1068, 1081-1105, as amended; 47 U.S.C. 151-155, 301-609, unless otherwise noted.

2. Section 97.109 is amended by revising paragraphs (d) and (e) to read as follows:

97.109 Station control.

(d) When a station is being automatically controlled, the control operator need not be at the control point. Only stations specifically designated elsewhere in this Part may be automatically controlled. Automatic control must cease upon notification by an EIC that the station is transmitting improperly or causing harmful interference to other stations. Automatic control must not be resumed without prior approval of the EIC.

(e) No station may be automatically controlled while transmitting third party communications, except a station transmitting a RTTY or data emission. All messages that are retransmitted must originate at a station that is being locally or remotely controlled.

3. Subpart C of Part 97 is amended by adding new Section 97.221 to read as follows:
97.221 Automatically controlled digital station.

(a) This rule section does not apply to an auxiliary station, a beacon station, a repeater station, an earth station, a space station, or space telecommand station.

(b) A station may be automatically controlled while transmitting RTTY or data emissions on the 6 m or shorter wavelength bands, and on the 28.120-28.189 MHz, 24.925-24.930 MHz, 21.090-21.100 MHz, 18.105-18.110 MHz, 14.0950-14.0995 MHz, 14.1005-14.112 MHz, 10.140-10.150 MHz, 7.100-7.105 MHz, or 3.620-3.635 MHz segments.

(c) A station may be automatically controlled while transmitting a RTTY or data emission on any other frequency authorized for such emission types provided that:

(1) The station is responding to interrogation by a station under local or remote control: and

(2) No transmission from the automatically controlled station occupies a bandwidth of more than 500 Hz.

FOOTNOTES

[1] Section 97.3(a) of the Commission's Rules, 47 C.F.R. 97.3(a), defines automatic control as the use of devices and procedures for control of a station when it is transmitting so that compliance with the Commission's Rules is achieved without the control operator being present at a control point. Only stations specifically designated in the rules may be automatically controlled.

[2] Section 97.3(c) of the Commission's Rules, 47 C.F.R. 97.3(c), authorizes amateur stations to use any of eighteen data and RTTY emission types when transmitting digital communications. The nine data emission types enable amateur stations to transmit telemetry, telecommand, and computer communications. The nine RTTY emission types enable amateur stations to transmit narrow-band direct-printing telegraphy communications.

[3] RM-8218 was filed by The American Radio Relay League, Inc., (ARRL). RM-8280 was filed by the American Digital Radio Society, Inc., (ADRS). The ARRL also filed comments strongly supporting RM-8280.

[4] Of the nine frequency segments allocated to the amateur service in the HF (3-30 MHz) portion of the radio spectrum, data and RTTY digital emissions may be transmitted on all but the 75 meter band (3.75-4.00 MHz.)

[5] The rules applicable to amateur service message forwarding systems were revised effective June 1, 1994, in PR Docket No. 93-85. See Report and Order, PR Docket No. 93-85. 9 FCC Rcd 1786 (1994). These revisions, however, did not authorize automatic control of stations transmitting on the HF bands. See also, Public Notice, Report No. DC-2605, June 2, 1994.

[6] Automatic control of digital communications allows amateur operators to utilize high-speed computer-based message technology for the rapid and accurate relaying of messages and data.

[7] See Report and Order, PR Docket No. 85-105, 51 Fed. Reg. 3069 (1986).

[8] See Memorandum Opinion and Order, PR Docket No. 85-105, 1 FCC Rcd 166 (1986).

[9] The protocol was the American Radio Relay League, Inc. AX.25 Amateur Packet-Radio Link-Layer Protocol, Version 2.0, October 1984.

[10] ARRL petition at 18-19.

[11] ARRL petition at 15-16.

[12] ADRS petition at 1-2. ADRS members are Commission-licensed amateur radio operators interested primarily in developing digital communications technology.

[13] ADRS petition at 6.

[14] ADRS petition at 11.

[15] ADRS petition at 10-11.

[16] Comments of the ARRL in Response to RM-8280 at 8.

[17] Other examples of designated subbands to minimize interference include subbands for repeater stations, Section 97.205(b) of the Commission's Rules, 47 C.F.R. 97.205(b), and a weak-signal subband recently established at 220.00-222.15 MHz. See Report and Order PR Docket No. 92-289, 8 FCC Rcd 8428 (1993).

[18] Stations are authorized to transmit a RTTY or data emission on frequency segments specified in Section 97.305(c) of the Commission's Rules, 47 C.F.R. 97.305(c). On the HF bands, these subbands are separate from the subbands where analog emission types are authorized.

[14] Vice President Al Gore, Report of the National Performance Review, From Red Tape to Results: Creating a Government That Works Better and Costs Less, at 6-8 (1993). The Vice President's Report stresses putting people first. Serving customers and cutting costs are two of its key principles. This Notice embraces these principles by seeking ways to allow amateur service licensees to use efficient technologies that are now available so that they can operate their stations in the manner they desire.

2. ARRL DCC '94

From: gjones (Greg Jones)
Date: Tue, 28 Jun 94 22:49:25 CDT
To: tapr-bb
Message-ID: <9406290349.AA131508@tcet.unt.edu>
Rendered body type: text/plain

>From: Rick_Whiting@ATK.COM (Rick Whiting)
Newsgroups: rec.radio.amateur.digital.misc
Subject: ARRL Digital Conference
Date: 28 Jun 94 21:19:16 GMT

	Subject:	Time:3:13 PM
OFFICE MEMO	ARRL Digital Conference	Date:6/28/94

The deadline for submission of papers for publication in the Proceedings of the 13th annual ARRL Conference on Digital Communications has been extended to July 5, 1994. Papers should be submitted to: Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111 or via Internet to lweinber@arrl.org. It is not necessary to present the paper at the Conference for the paper to be published in the Proceedings.

So, if you haven't already done so, put your fingers to the keyboard and write-up your software and hardware developments, experimental results, ideas, theories, philosophy, etc., to share with the digital communications community.

The ARRL Digital Conference will be held August 19-21, 1994, at the
Thunderbird Hotel and Conference Center in Bloomington, MN, U.S.A. (near the
Minneapolis International Airport). The main Conference presentations will
be on Saturday August 20. In addition to the presentation of papers, six
forums are planned covering digital data methods, DSP developments, HF data
methods, TCP/IP developments, ARRL Committee updates, and high speed data
transfer.

For more information call Cathy Thomas at 1-800-726-6715 or write to ARRL
Digital Conference, Paul Ramey WG0G, 16266 Finland Ave., Rosemount, MN 55068,
U.S.A.

73 de Rick W0TN <rick_whiting@atk.com>

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3. PSR Deadline

From: Greg Jones <gjones@tenet.edu>
Date: Thu, 23 Jun 1994 04:08:21 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing)
Message-ID: <199406230908.EAA07849@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

PSR Deadline is July 4th.

The Packet Status Register is still looking for regional organizations to
publish status articles on their activities.

In addition, PSR is looking for any technical or project related articles or
stories.

Send articles to psr@tapr.org.

4. TAPR SIG Archives

From: Greg Jones <gjones@tenet.edu>
Date: Sat, 18 Jun 1994 11:20:16 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing),
        netsig@tcet.unt.edu (NETSIG mailing),
        bbssig@tcet.unt.edu (BBSIG mailing)
Message-ID: <199406181620.LAA23551@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

The TAPR SIG mail exchange archives are being made available via FTP access.

system: tcet.unt.edu

directory: tapr/SIG

5. ARRL 1994 Digital Conference

From: Greg Jones <gjones@tenet.edu>
Date: Sat, 18 Jun 1994 11:07:06 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing)
Message-ID: <199406181607.LAA22949@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

1994 Digital Conference - Deadline Monday.

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CALL FOR PAPERS:
     Anyone interested in digital communications is invited to submit a
formal paper for publication in the conference Proceedings. Presentation at
the conference is not required for publication. Papers are due by June 20 and
should be submitted to Maty Weinberg, ARRL, 225 Main St., Newington, CT 06111
or via Internet at lweinber@arrl.org. A schedule for presentation of papers
will be available in early July.
****

Although papers are typically taken up to a few days after the deadline.

Forwarded message:
>From: ESTEY@SKYLER.MAVD.HONEYWELL.COM
Date: Sun, 16 Jan 1994 22:18:40 -0600 (CST)

>From: Mike Stapp KE0WW   FOR IMMEDIATE RELEASE
        TwinsLAN Amateur Radio Club
        h   612 823-2351
        w   612 951-0232

fax 612 951-2333
packet KE0WW@WA0CQG.#MSP.MN.USA.NA

ARRL NATIONAL DIGITAL CONFERENCE 1994 ANNOUNCED

MINNEAPOLIS, JANUARY 12 -- The TwinsLAN ARC today announced that it will sponsor the 1994 ARRL National Digital Communications Conference on August 19 through 21 at the Thunderbird Hotel and Conference Center in Bloomington, MN. The theme for this year's conference is "Digital Communications - Amateur Radio of Today...and the Future".

The objective of the conference is to create a forum for radio amateurs and experts in digital communications to meet, publish their work and present new ideas and techniques for discussion. Presenters and attendees will have opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. Areas of interest include generation, coding, modulation and demodulation, transmission, networking, processing, presentation and application of voice, text, image and data information.

The conference site is located near the Minneapolis/St. Paul International Airport, just off Interstate I-494. Free 24-hr shuttle service is available to and from the airport.

AGENDA:

The agenda for the three-day event includes informal activities for attendees and family members on Friday, August 19 through noon Sunday, August 21. Formal conference activities, including presentation of papers and six forums are scheduled for Saturday, August 20, from 8:30 am to 5 pm. A detailed agenda will be available when schedules are finalized.

CALL FOR PAPERS:

Anyone interested in digital communications is invited to submit a formal paper for publication in the conference Proceedings. Presentation at the conference is not required for publication. Papers are due by June 20 and should be submitted to Maty Weinberg, ARRL, 225 Main St., Newington, CT 06111 or via Internet at lweinber@arrl.org. A schedule for presentation of papers will be available in early July.

ACCOMMODATIONS:

On-site accommodations are available at a special rate of $67 (plus tax) for single occupancy or $73 (plus tax) for double occupancy. Make reservations directly with the Thunderbird Hotel at 800 328-1931 before July 29 for these special rates. Be sure to mention you are attending the National Digital Communications Conference. Off-site accommodations are available in the area starting at $39.95. Contact the NDCC Info Line for a list of facilities. Early reservations are encouraged. A list of area campgrounds for RVs is also available. Northwest Airlines is offering an additional 5% discount on airfare to and from the Twin Cities for conference attendees. Call the NDCC Info Line for details.

A FAMILY WEEKEND:

Family participation in the NDCC is encouraged. The hotel has a large pool for guests. Informal outings are planned to the Minnesota Zoo (admission extra) and the Mall of America, the largest indoor shopping mall in the US. Free scheduled shuttle service is also available from the conference center to the Mall. Minnesota is a great place to visit in August. Consider making this weekend an addition to your family vacation plans. Twin Cities and Minnesota tourist information packets are available on request to the NDCC Info Line.

REGISTRATION:

The conference registration fee is $45 per person, which includes a luncheon buffet, a set of conference papers (including those submitted but not presented) and transportation to the Mall of America on Saturday evening. Registration, by check payable to "TwinsLAN Conference", must be received by August 12. Mail your registration form and check to:

1994 National Digital Communications Conference
c/o Paul Ramey WG0G
16266 Finland Ave.
Rosemount, MN 55068

ADDITIONAL INFORMATION:

Contact Paul Ramey at the NDCC Info Line, 612 432-1149 (evenings and weekends) or Carl Estey via Internet e-mail at estey@skyler.mavd.honeywell.com.

6. HOT!!! FCC Acts on HF Digital Auto Control (fwd)

From: Greg Jones <gjones@tenet.edu>
Date: Wed, 15 Jun 1994 15:23:13 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing)
Message-ID: <199406152023.PAA05998@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

According to ad7i@hogpa.ho.att.com:
Date: Wed, 15 Jun 94 13:33:21 EDT
Organization: Tucson Amateur Packet Radio
Subject: HOT!!! FCC Acts on HF Digital Auto Control

!!!
!!!
!!!

Report No. DC-2613 ACTION IN DOCKET CASE June 15, 1994

AUTHORIZATION OF AUTOMATIC CONTROL FOR HF DIGITAL COMMUNICATIONS
IN AMATEUR SERVICE PROPOSED
(PR DOCKET 94-59)

The Commission has proposed amending the amateur service rules to authorize automatic control of stations transmitting a digital emission on the High Frequency (HF) amateur service bands.

This action was requested in petitions filed by The American Radio Relay League, Inc. (ARRL), and the American Digital Radio Society, Inc. (ADRS)

The propagation characteristics of the HF bands allow for long distance communications. Amateur operators take advantage of these characteristics to communicate with other amateur stations all over the world. Establishing and maintaining a HF communications link, however, presents operating demands not encountered on the Very High Frequency (VHF) and higher frequency bands. The variables affecting communications in the HF bands are highly complex. To maintain the communications link and avoid causing interference to the communications of other amateur stations, the control operator constantly monitors the activity on the channel being used and adjusts the station's transmitting parameters as needed. Because the presence of the control operator has been necessary for proper operation in these systems, automatic control of an amateur station that is transmitting on any HF band or on the 160 meter MF (medium frequency) band has not been authorized.

In 1986 the Commission authorized automatic control of amateur stations transmitting digital communications on the VHF and higher frequency bands and indicated it was interested in authorizing automatic control of stations using the HF bands.

To determine solutions to the problem of avoiding interference from automatically controlled HF digital stations the ARRL conducted a successful feasibility project under special temporary authority the Commission granted to 50 amateur stations. The ARRL's petition is based on the results of that study. The ADRS's petition contained an additional recommendation from amateur operators who have been experimenting for several decades with digital communications on the HF bands.

The Commission said it was gratified by the cooperation and dedication of organizations within the amateur service community in determining the conditions necessary to allow automatic control of stations transmitting data and RTTY (narrow-band direct printing) emission types on the HF amateur service bands. It agreed with the petitioners that automatic control of amateur stations in the HF bands can, with safeguards, make the transmission of data and RTTY emission types practical and effective.

Therefore, the Commission proposed to authorize automatic control for stations transmitting data and RTTY emission types on one specific subband of each HF band where such emissions are authorized. It also proposed to authorize communications between a locally or remotely controlled station and an automatically controlled station on any frequency where data and RTTY emission types are otherwise authorized.

The Commission said that it firmly believes in the principle that government should be responsive to user needs. It noted that the rules it proposed were the result of a successful feasibility project planned and carried out within the amateur service community and represent the recommendations of two organizations dedicated to bringing the benefits to be derived from the transmission of digital communications on the amateur service HF bands to amateur operators in the United States and elsewhere without causing unnecessary interference to other types of communications.

Action by the Commission June 13, 1994, by Notice of Proposed Rulemaking (FCC 94-171). Chairman Hundt, Commissioners Quello and Barrett, with Commissioners Ness and Chong not participating.

- FCC -

News Media contact: Rosemary Kimball at (202) 418-0500.
Private Radio Bureau contact: William T. Cross at (202) 632-4964.

7. TRACK-BOX

From: Greg Jones <gjones@tenet.edu>
Date: Tue, 14 Jun 1994 21:54:26 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing)
Message-ID: <199406150254.VAA03197@Gayle-Gaston.tenet.edu>
Rendered body type: text/plain

Date: 6/14/94
Re: TAPR TrackBox

TAPR is now out of TrackBox units.

The TAPR board is looking over two possible designs to replace the older units. No timeline as to when these will be made available as kits or which will be chosen as a final design.

More information will appear later this year in the PSR.

Greg

President -- Tucson Amateur Packet Radio Corp

TAPR Office (817) 383-0000 | Internet: gjones@tenet.edu
---

8. TAPR PSK Kit

From: Greg Jones <gjones@tenet.edu>
Date: Mon, 13 Jun 1994 01:50:22 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing)
Message-ID: <199406130650.BAA02313@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

Just when you thought you would never be able to acutally have the experience of building your own TAPR PSK modem :-) we have three kits available for those that want to relive the experience.

TAPR discontinued this kit the first of this year; however, Cathy Green, our kit builder, discovered 2 board sets and with the return of an unbuilt unit, TAPR has 3 kits availble.

Just drop Dorothy a call or fax at the office. First come basis.

Cheers - Greg

P.S. The disclaimer:
This kit is not for everyone. The TAPR PSK modem kit was one of the most difficult kits that TAPR has done. A number of builders never got their units fully operational on the satellites, although a great many were completely successful.

Tucson Amateur Packet Radio Corp

```
TAPR Office (817) 383-0000  | Internet: tapr@tapr.org
TAPR Fax    (817) 566-2544  |
------------------------------------------------------------------------------
```

9. TAPR Tech Support

```
From: Greg Jones <gjones@tenet.edu>
Date: Tue, 7 Jun 1994 02:13:38 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing)
Message-ID: <199406070713.CAA19309@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain
```

TAPR is looking for more people to participate in our Technical Support Group. This group handles the day to day questions the office receives about technical issues. It is important that we get some more people involved, so that we do not burn out some of our current volunteers.

Technical support for all TAPR kits and projects are supported by volunteers. The more volunteers we have helping, the better TAPR can help folks with their problems.

We are looking for additional help in the following areas:

TAPR 9600 baud modem kit
DevMeter kits
TNC problems and upgrades
and General Packet Questions (beginning to intermediate in nature).

If you think you might like to help work with folks on their problems, please send email to tapr@tapr.org stating what you can help with. Providing this help, takes maybe 30minutes to an hour a week depending on the area and the amount of questions we are getting in. The more people we have involved in each area, the less time everyone in a specific group spends on correspondence. You can also be in more than one area if you want. If you have another area you feel you would like to cover, please pass that along to us. We can then make a note of that and use you when andif we get a question in that area.

We are also looking for a technical support group manager to help coordinate the followup on technical issues within TAPR. If you think you might be interested in this, please e-mail tapr@tapr.org I can cover the responsibilities in later e-mails.

Most technical help and questions are received by mail and phone calls. When someone asks TAPR for technical help or to answer a question the office forwards the request to someone on the technical help list. The volunteer then answers the questions by phone (many times by making a collect call) or by writing a mail (US type) in reply. (most amateurs asking for help are not on commercial e-mail services or they would be asking there :-)

In addition, we are on the lookout for any regional elmer groups that we can pass out. We have several lists for some sections of a few states, but we are looking for more. Local elmers are sometimes the best solution to any question or problem. This also applies to any regional packet groups that might be doing the same thing.

Cheers - Greg

10. smtp mail failed

```
From: postmaster@iconet.Ico.Olivetti.Com
Date: Sun, 5 Jun 94 01:25:43
To: @olivea:tapr-bb@tcet.unt.edu
Message-ID: <9406042325.AA10171@olivea.ATC.Olivetti.Com>
Rendered body type: text/plain
```

```
Your mail to xsfi1 is undeliverable.
---------- diagnosis ----------
---------- unsent mail ----------
>From tcet.unt.edu!tapr-bb Sun Jun  5 01:25:29 1994 remote from iconet
>From tapr-bb Sat Jun  4 18:24:41 CDT 1994 remote from tcet.unt.edu
Received: from tcet.unt.edu by iconet.Ico.Olivetti.Com;
Received: from tcet.unt.edu by olivea.ATC.Olivetti.Com (4.1/SMI-4.1)
        id AA10043; Sat, 4 Jun 94 16:25:11 PDT
```

```
Received: by tcet.unt.edu (5.61-AIX-1.2/1.0)
        id AA116215 (for angelini@xsfi1.ICO.OLIVETTI.COM, from tapr_bb/tapr_bb@tcet.unt.edu); Sat, 4 Jun
 94 18:24:41 -0500
Received: by tcet.unt.edu (5.61-AIX-1.2/1.0)
        id AA116215 (for angelini@xsfi1.ICO.OLIVETTI.COM, from tapr_bb/tapr_bb@tcet.unt.edu); Sat, 4 Jun
 94 18:24:41 -0500
>From: tapr_bb@tcet.unt.edu (TAPR Information Distribution)
Message-Id: <9406042324.AA116215@tcet.unt.edu>
Subject: GPS buy Motorola GPS engine purchase information
To: angelini@xsfi1.ICO.OLIVETTI.COM
Date: Sat, 4 Jun 94 18:24:41 CDT
Reply-To: "TAPR Information Distribution" <tapr-bb@tcet.unt.edu>
X-Mailer: ELM [version 2.4dev PL17]
Content-Type: text
Content-Length: 9455

>From: "Alan P. Biddle" <BIDDLEAP@ctrvax.Vanderbilt.Edu>
Subject: GPS buy
To: tapr-bb@tcet.unt.edu
Date: Sat, 04 Jun 1994 17:12:38 -0500 (CDT)

[Alan has asked for help with this.  If you have comment, please mail
 back to Paul and not the tapt-bb group.                              ]

===

A while back, the was a brief offer of a group purchase of a GPS system,
quickly withdrawn.  The following came off KO-23, and is indeed on many
Internet news groups.  It looks interesting, but does anyone have any
thoughts on this, or the person offering the deal?

Thanks,

Alan

>From: bonomo@specxn.enet.dec.com
Newsgroups: rec.radio.amateur.space
Subject: Motorola GPS engine purchase information
Message-ID: <1994May25.182204.12821@nntpd2.cxo.dec.com>
Date: 25 May 94 18:22:04 GMT
Sender: usenet@nntpd2.cxo.dec.com (USENET News System)
Reply-To: bonomo@specxn.enet.dec.com ()
Organization: Digital Equipment Corporation
Lines: 352
X-Newsreader: mxrn 6.18-10
```

11. GPS buy

```
From: "Alan P. Biddle" <BIDDLEAP@ctrvax.Vanderbilt.Edu>
Date: Sat, 04 Jun 1994 17:12:38 -0500 (CDT)
To: tapr-bb@tcet.unt.edu
Message-ID: <01HD5H6K1J8Y8WWUG6@ctrvax.Vanderbilt.Edu>
Rendered body type: text/plain
```

```
[Alan has asked for help with this.  If you have comment, please mail
 back to Paul and not the tapt-bb group.                              ]

===

A while back, the was a brief offer of a group purchase of a GPS system,
quickly withdrawn.  The following came off KO-23, and is indeed on many
Internet news groups.  It looks interesting, but does anyone have any
thoughts on this, or the person offering the deal?

Thanks,

Alan

>From: bonomo@specxn.enet.dec.com
Newsgroups: rec.radio.amateur.space
Subject: Motorola GPS engine purchase information
Message-ID: <1994May25.182204.12821@nntpd2.cxo.dec.com>
Date: 25 May 94 18:22:04 GMT
Sender: usenet@nntpd2.cxo.dec.com (USENET News System)
Reply-To: bonomo@specxn.enet.dec.com ()
Organization: Digital Equipment Corporation
Lines: 352
X-Newsreader: mxrn 6.18-10
```

Greetings, one and all!

This message is ASCII text, formatted as <CR> at =<78 characters, tabs at +8.

Have finally received "everything" which I will obtain from Motorola and Trimble, and the order requests have dwindled to a minimum, I have attached the specifications and pricing below.

In a nutshell, the Motorola unit is better in every way, excepting three factors. The Trimble unit:

1) is about 1/8" smaller in width and height,
2) is about .6 ounce lighter,
3) consumes less power in standby, quoted as ~2uA nominal, versus the Motorola's stated maximum of 60uA.

Other than that, the Motorola VP Oncore engine is superior in all ways, including price. The recommendation, from my perspective, is to choose the Motorola unit, but your choice may vary. The above factors, in which the Trimble unit is superior, may be significant ones for you.

I have had requests from 375 individuals, from nine countries, for over 435 units. All this is, of course, based on a "$150" purchase price, which is not available.

Understanding this, it seems best if there is a "standard" configuration which is ordered, as the pricing given is for quantities of 100 and greater. If 100+ want the options, we'll order those, too. Remember, all prices are for 100+ units per item. In other words, if 25 units are wanted with the LNA option, the pricing for that LNA option will be be somewhat higher than the figure quoted below, and I'm not sure if Motorola can (or will) handle one-sie, two-sies and get it right.

****
The recommended "standard" configuration:

Item	Price / each (includes Colorado State sales tax)
VP Oncore engine	$268
Active Antenna	$ 70
Cable to antenna	$ 22

Total "standard"	$360

****

Options to be considered:

LNA	$ 16
battery	$ 11

Shipping within the continental U.S., via 2nd day service, will run $10. This includes a box, packing foam and shipping charges. This figure is good for up to ten units.

Those interested in this group purchase should remit monies to the name and address below. Please send non-cash such as personal checks, money orders or the like, as it allows records to be kept much more easily. If less than 100 orders are placed, the checks/money orders will be destroyed, rather than incurring the cost of returning up to 100 of them. Alternately, if you want your check returned in the event of an insufficient number of units ordered, add a dollar bill to cover the cost of an envelope, stamp and my or my wife's writer's cramp which will inevitably result. If the order threshold is reached and an order is placed with Motorola, the $1 will be returned to you with your order. Please include a very complete address to which the order may be sent. Include your current Internet address and telephone number(s) where you may be reached, as well. I've experienced several Inet addresses which have bounced, by the way, so if you didn't receive a response from me directly, it was attempted.

Send orders to:

Thomas A. Bonomo
8147D Summerset Drive
Colorado Springs, Co. 80920.6123

I can be reached, and have been by several individuals, at:

```
        Telephone:      (719)593.9883   Home    (evenings, weekends)
                        (719)592.5105   Office  (weekdays)
        Internet:       tom.bonomo@cxo.mts.dec.com
```

This message will be posted to the newsgroups, as well.

Thanks for your patience as I've gathered information and responded to each of your requests.

Regards,

Tommy

Specifications and pricing information follows.

/\

/\

```
Motorola VP ONCORE SPECIFICATION DATA SHEET
--------------------------------------------

Receiver Architecture
---------------------
        o       6 channel
        o       L1 1575.42 MHz
        o       C/A code (1.023 Mhz chip rate)
        o       Code plus carrier tracking (carrier aided tracking)

Tracking Capability
-------------------
        o       6 satellite vehicles simultaneously

Dynamics
--------
        o       Velocity:       1000 m/s when altitude less than 18 km
        o       Altitude:       18 km for velocities greater than 514 m/s
        o       Accelleration:  4 g

Antenna
-------
        o       accepts active and passive antennas

Acquisition Time
----------------
(TTFF = Time To First Fix)
        o       22 sec. typical TTFF (with current almanac, position, time and
                ephemeris)
        o       48 sec. typical TTFF (with current almanac, position and time)
        o       2.5 seconds typical re-acquire

Accuracy
--------
        o       Position:       less than 25 meters, SEP (without SA).
                DoD may invoke Selective Availability (SA), potentially
                degrading accuracy to 100 meters (2 dRMS)

DATUMs
------
        o       49 std. datums, 2 user defined, default WGS-84

Signal Level
------------
        o       TTL

Output Messages
---------------
        o       Latitude, longitude, height, velocity, heading, satellite
                tracking status (Motorola Binary Protocol)
        o       NMEA-0183 Version 2.00 (GGA, RMC, GLL, GSA)
        o       LORAN emulation mode
        o       Software selectable
```

Operating voltage

- 4.75 - 5.25 VDC, 50 mVp-p ripple

Operating current

- 230 mA typical @5V, 275 mA max at 5.25V

Standby voltage

- 2.5 - 5.0 VDC

Standby current

- 60 ua max

Dimensions

- 2.00" x 3.25" x .64" (50.80mm x 82.55mm x 16.26mm)

Weight

- 1.9 oz. (53.9g)

Connectors

- Digital: 10 pin (2 x 5) header on .100" centers
- RF: right angle OSX (sub-miniature snap-on)

Operating Temperature

- -30 - +85 degrees C (without on-board battery)
- -20 - +60 degrees C (with on-board battery)

Storage Temperature

- -30 - +85 degrees C (without on-board battery)
- -20 - +60 degrees C (with on-board battery)

Humidity

- 95% RH, non-condensing

Vibration

- 7.7 g, random (survivability)

MTBF

- >61,000 hours (estimated)

Optional features

- Lithium battery
- Low Noise Amplifier
- Real Time Clock

Pricing (includes Colorado state sales tax)

VP Oncore engine	$268
Active Antenna	$ 70
Cable to antenna	$ 22
Low Noise Amp	$ 16
Lithium Battery	$ 11

Development Software

1st option includes: Raw code phase, disc data, smooth sat time, carrier phase	$270
2nd option includes:	$215

```
        above without
        carrier phase



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Specifications for Trimble SVeeSix GPS engine
-----------------------------------------------

        Model:  SVeeSix-CM2


General
--------

        L1 Frequency, C/A code (SPS), 6 channel, continuous tracking receiver


Update Rate
-----------

        NMEA - 1Hz


Accuracy
--------

        Position:       25m without SA
        Velocity:       0.1m/s without SA
        Time:           1 us (nom)


DGPS Accuracy
-------------

        Position:       2m to 5m (2 sigma)
        Velocity:       0.1m/s
        Time:           1 us (nom)


Acquisition (typ)
-----------------

        Cold Start:     2 to 5 minutes
        Warm Start:     50 sec with time upload
        Hot start:      30 sec with time upload


Reaquisition
------------
                <2 sec


Dynamics
---------

        Velocity:       500 m/sec max
        Acceleration:   4g
        Jerk:           20m/sec^3


Environmental Specs.
--------------------

        Operating temp: -10C to +60C
        Storage temp:   -55C to +100C
        Vibration:      0.008g^2/Hz  5Hz to 20Hz
                        0.05g^2/Hz 20Hz to 100Hz
                        -3dB/octave 100Hz to 900Hz

        Operating Humidity:     5% to 95% RH non-condensing @+60C
        Altitude:               -400m to +18000m
```

```
Physical Characteristics
------------------------

        Dimensions:     3.25" x 1.83" x 0.58"
        Weight:         1.3 oz. (36.4g)
        Connectors:     RF: SMB, I/O: 8 pin (2x4), 2mm header


Technical Specifications
------------------------

        Prime power:            +5Vdc (-3% to +5%)
        Power consumption:      280 ma, 1.40 watts
        Backup power:           +3 to +5 Vdc
        Backup consumption:     1 uA @3V and +25C (nom)
        Serial port/1PPS:       CMOS TTL
        Protocol options:       TSIP @9600 baud, 8-O-1
                                NMEA 0183 v2.0 @4800 baud, 8-N-1
                                TAIP @4800 baud, 8-N-1

        NMEA messages:          Standard:       GGA,VTG
                                Optional:       GGA,GLL,VTG,ZDA,GSA,GSV,RMC



Pricing (includes Colorado state tax)
-------------------------------------

        SVeeSix CM2, DGPS capable       $321
        Antenna (includes cable)        $118


/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\
```

12. Upcoming PSR Deadline

From: Greg Jones <gjones@tenet.edu>
Date: Sat, 4 Jun 1994 00:04:04 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing)
Message-ID: <199406040504.AAA08259@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

The next PSR, Issue #54, deadline will be sometime the first of July.

If you have a technical report, operational news, or something of interest, please send it to Bob Hansen, N2GDE, at psr@tapr.org

TAPR has made the commitment to make space available in the PSR for any regional group that wants to present or discuss what they are doing currently. If you are in a regional packet group, please pass this along to your newsletter editor or whoever can take advantage of this. Sharing information between the regional group is important in understanding what is happening as a national effort in he US.

If you have done something technical, please take some time and write it up. While you might think the information is not very useful, someone else in TAPR is probably thinking or trying to do the same thing and will find your work helpful. Even better, your work might spark someone else to do something.

You now have a month to go out and do a little writing :-)

Cheers- Greg

13. TAPR Listserv Procedures

From: Greg Jones <gjones@tenet.edu>
Date: Fri, 3 Jun 1994 12:26:27 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing)
Message-ID: <199406031726.MAA06048@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

```
INFORMATION ON TAPR MAIL GROUPS
6/3/94
-------------------------------
```

There have been several questions on how the TAPR lists are currently being run.

All three lists, NETSIG, BBSSIG, and TAPR-BB are moderated lists.

I read each list before allowing processing to happen. This is to reply to
messages about join, unjoin, test, and so on by hand instead of having them
posted to the group. Any message dealing with direct content is not being
changed and is being posted as sent. The purpose of the moderation is to
eliminate those incorrectly addressed messages. tapr-bb (this list) is
a lot more tight than the others - since this is not an open
discussion group, but one regarding posting of TAPR information for
distribution. I reply to most messages sent to it that should normally be
sent to TARP@TAPR.ORG.

Last weekend, we changed the listserv in order to eliminate our BOUNCED MAIL
problem. The change that resulted has mail being sent from different
accounts than those of the postings. Messages sent to netsig or now sent from
net_sig. A reply-to line is included in all messages, which most mailer
programs handle correctly. If you do post to the wrong address, the mail
eventually get sent to me by the listserv program and I send a message back
to the sender regarding the problem.

I check the listserv 2 or more times a day and then start the process up.
The listserv script (handling join, unjoin, help, etc) runs
throughout the day by itself. Only the group lists run at different time,
based on when I start them up.

If you have any questions, please send me e-mail at gjones@tenet.edu.

Greg

President -- Tucson Amateur Packet Radio Corp

TAPR Office (817) 383-0000 | Internet: gjones@tenet.edu
---

14. PSR #54

From: Greg Jones <gjones@tenet.edu>
Date: Tue, 31 May 1994 20:22:55 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing)
Message-ID: <199406010122.UAA10293@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

PSR #54 was mailed last Firday.

If you are a member of TAPR, please send me e-mail (gjones@tenet.edu) when
you receive your newsletter. We are trying to get an idea on the time it
takes for 2nd class mail to be distributed to the membership.

That is e-mail to me: gjones@tenet.edu. Please do not reply back to the
tapr-bb group.

Also - I would welcome any comments on this issue.

Cheers - Greg

President -- Tucson Amateur Packet Radio Corp

TAPR Office (817) 383-0000 | Internet: gjones@tenet.edu

July 1994

Original source file: tapr-bb.9407
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1994-07/TAPR-BB_1994-07.txt

1. Stolen

From: root (The Super-user)
Date: Sat, 30 Jul 94 18:27:07 CDT
To: tapr-bb
Message-ID: <9407302327.AA171593@tcet.unt.edu>
Rendered body type: text/plain

Forwarded message:
>From cooper@cwis.unomaha.edu Sat Jul 30 08:43:42 1994
Message-Id: <9407301342.AA18330@cwis.unomaha.edu>
Subject: Stolen
To: netsig@tcet.unt.edu
Date: Sat, 30 Jul 1994 08:42:46 -0500 (CDT)
>From: Steve Cooper <cooper@cwis.unomaha.edu>
X-Mailer: ELM [version 2.4 PL21]
Content-Type: text
Content-Length: 1696

Hello TAPR,
Myself and my wife recently decided that it was time to move from my old
address. The old neighborhood didn't like all the ham antennas either
and when I put up the HyGain TH-11DX HF antenna they proceeded to go
after me. Anyway we took everything down and sold the house. We had
everything put in storage while we build a new house out in the
country and we are now about 3 weeks from moving in. Last weekend
while I was working RAGBRI with our local ham group someone broke
into 26 of the storage units where we had everything stored. The got
things besides this but this is the ham gear they got. If you find
any of the gear I would appreciate it. It is stolen. I have replacement
insurance and they didn't get all my gear but they did get these pieces.
If anyone can put this the nation wide bbs system I would appreciate it.
I am living in a one bedroom apartment until the house is done.

EQUIPMENT STOLEN:

Icom 211 2 meter all mode base station s/n 3894
with SM4 microphone unit has all the filters

Icom 735 High Frequency Base Station Rig s/n 08016
with SM6 Microphone and PS 55 Power Supply

Kenwood TR-751A SSB 2 meter Rig S/N 8080003

RF Concepts 2-117 2 meter Amplifier s/m 3085

All units have the serial numbers engraved on them along with my old
address, call letters and old telephone numbers and my work phone
number. They also have the information engraved on the inside
bottom covers of the rigs. I would appreciate it if you could cut
and paste this message to the national system. I am sick over this.

Thanks,
Steve Cooper
N0KVC
work 402-554-2758 home 402-342-0732 (evenings)
or unocooper@applelink.apple.com or
cooper@cwis.unomaha.edu

2. Update: 13th ARRL Digital Communications Conference

From: Greg Jones <gjones@tenet.edu>
Date: Fri, 22 Jul 1994 19:43:28 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing)
Message-ID: <199407230043.TAA17805@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

>From: ESTEY@SKYLER.MAVD.HONEYWELL.COM
Date: Fri, 22 Jul 1994 19:31:17 -0500 (CDT)

       ARRL 13th ANNUAL DIGITAL COMMUNICATIONS CONFERENCE AUGUST 19-21

Do you operate a Digital mode (maybe Pactor, Packet, GTOR or AMTOR) now?
Do you find it difficult to keep up with the latest Digital technology?

Would you like to know more about Digital modes?
If you answered "yes" to any of these questions, then you should attend the
13th Annual ARRL Digital Communications Conference. Read on ...

The Conference will be held on August 19 - 21, 1994 at the Thunderbird
Convention Center, 2201 East 78th Street in Bloomington, Minnesota.
Accomodations are available at the adjacent Thunderbird Hotel, at the many
Hotels and Motels located within a short distance, and also at several area
RV\camper campgrounds.

Enjoy a weekend of fun learning about the latest developments in TCP/IP,
PACTOR, AMTOR, PACTOR-II, CLOVER, G-TOR, PACKET, DSP, and imaging. Participate
in the nine forums about DSP, new HF modes, TCP/IP, VHF/UHF networking, BBS
SYSOP issues and more. A glance at the program (attached) will show many
forums that will catch your interest!

```
*****************************************************************************
*                          ***  NEWS FLASH  ***                             *
*                                                                           *
*              BEGINNER'S FORUM ADDED TO FRIDAY CONFERENCE AGENDA           *
*  If you are a newcomer to Digital Communications and feel somewhat        *
*  intimidated by all of the technical "jargon", then the Friday Evening    *
*  Beginner's Forum is just the thing for you.  Veteran instructor John     *
*  Kaplan, WR0W, will present a "crash" course from 7-9:30 PM to help you   *
*  feel more comfortable in the Saturday technical forums and discussions.  *
*  There is no extra cost for this forum - its included in the main         *
*  registration fee.  Space is limited so register now!                     *
*****************************************************************************
```

One of the highlights of the conference will be the presentation of 18
technical papers on the many aspects of digital communications throughout the
day on Saturday. A list of papers is attached. You will receive a copy of
all papers presented.

Many demonstrations of the latest in hardware and software will be presented.
When you leave, you will have an in-depth understanding of the latest digital
communications advancements and techniques. The Saturday evening Technical
Showcase will feature TAPR Special Interest Group meetings for BBS SYSOPs
and on VHF/UHF network building and a nearly-mathless presentation of the
design and implementation of DSP software for a high-performance HF DSP
modem based on the $99 TI DSK DSP evaluation module by Johan Forrer, KC7WW.

The Hospitality Room will provide the place to meet old friends ... and make
new ones. At the Saturday luncheon you will get to know "who's who" in
digital communications. Meet the Engineering staff of manufacturers like
Kantronics and Timewave Technologies. The optional Saturday evening diner
will provide another opportunity to make new friends.

If you want a break from the Conference, the Mall of America, with hundreds
of unique stores, is located within easy walking distance. Your family will
enjoy Knott's Camp Snoopy theme park inside the Mall. The renowned Minnesota
Zoo is only a short drive away.

The Conference registration fee is $45 per person, which includes admission to
all Conference activities, a luncheon buffet and a copy of the technical
papers. An optional Saturday evening buffet is $20 per person additional.
Registration deadline is August 12th.

For more information about the Conference or special Airline and Motel
discounts call or write:

```
             ARRL Digital Communications Conference
             C/O Paul Ramey WG0G
             16266 Finland Avenue
             Rosemount, MN 55068
             Packet:     WG0G@WA0CQG.#MSP.MN.USA.NA
             Telephone:  (612) 432-1640
             Internet:    PRAMEY@RAM.NET
```

The host organization for the 1994 ARRL Digital Communications Conference is
the TwinsLAN Amateur Radio Club.

       See YOU at the Digital Communications Conference August 19-21!

         13th ANNUAL ARRL DIGITAL COMMUNICATIONS CONFERENCE
                       PRELIMINARY PROGRAM

Friday, August 19

```
TIME             ROOM      EVENT
```

```
Noon - 6    PM   TBD       ARRL "Future Modes"
                           Committee meeting.
Noon - 6    PM   TBD       ARRL "219-MHz" Committee
                           meeting.
4    - 10   PM   Menominee Conference check-in.
6 PM - 11   PM   Menominee Hospitality & Demo area open

Saturday, August 20
TIME             ROOM      EVENT
 6:30 -  Noon    Menominee Hospitality & Demo area open
 7:00 -  Noon    Menominee Conference Check-in.
 8:00 -  8:15 AM Miami     Conference "Welcome"
 8:30 - 10:00 AM Miami     Technical Paper Presentation
 8:30 - 10:00 AM Yakima    Forum - Developments in DSP
                                   For the Amateur.
 8:30 - 10:00 AM Shoshone  Forum - TCP/IP - What's next?
10:00 - 10:15 AM All       Break
10:15 - 11:45 AM Miami     Technical Paper Presentation
10:15 - 11:45 AM Yakima    Forum - ARRL Committee
                           Updates:  "Future Modes":
                           Moderator - Paul Rinaldo W4RI
                           and "219-MHz Networking":
                           Moderator - Tod Olson K0TO"
10:15 - 11:45 AM Shoshone  Forum - Digital Data (Voice
                           and Image) Transmission
                           Method Developments.
11:45 -  Noon AM All       Break
Noon  -  1:00 PM Miami     Buffet Luncheon (Included)
 1:00 -  5:30 PM Menominee Hospitality & Demo area open
 1:15 -  2:45 PM Miami     Technical Paper Presentation
 1:15 -  2:45 PM Yakima    Forum - High-Speed (above
                           1200 baud) data transfer
                           methods and networking
                           techniques.
 1:15 -  2:45 PM Shoshone  Forum - HF Data Transmission
                           Methods - An Over-view of
                           Current Modes and What's
                           Coming Next.
 2:45 -  3:00 PM All       Break
 3:00 -  4:30 PM All       Continuation of all sessions
 5:30 -  6:30 PM Miami     Buffet Diner (Optional)
 7:00 - 11:00 PM Menominee Hospitality & Demo area open
 7:00 - 10:00 PM Miami     Tucson Amateur Packet Radio
                           (TAPR) Presents Special
                           Interest Groups:
                              - Packet BBS SYSOPs
                              - VHF/UHF Network Building
 7:00 - 10:00 PM Yakima    American Digital Radio
                           Society (ADRS)presents a
                           technical presentation:
                           "A Low Cost DSP Modem for HF Digital
                           Experimentation" by
                           Johan Forrer, KC7WW

Sunday, August 21

TIME             ROOM      EVENT
 8:30 -  Noon    Menominee Hospitality & Demo area open
10:00 - 11:00    Menominee Conference wrap-up and close.

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          13th ARRL Digital Communications Conference Proceedings

1.   A Proposal for a Standard Digital Radio Interface
        Written by Jeffrey Austen, K9JA

2.   Automatic Packet Reporting System (APRS)
        Written by Bob Bruninga, WB4APR; Presented by Gwyn Reedy, W1BEL

3.   Broadcast, UI and un-connected protocols-the future of Amateur Packet
     Radio?
        Written and Presented by Paul Evans, W4/G4BKI

4.   Packet, GPS, APRS and the Future
        Written and Presented by Paul Evans, W4/G4BKI

5.   Computer Networks in Africa: From Utopian Discourse to Working Reality
        Written by Iain Cook
```

6. A Low Cost DSP Modem for HF Digital Experimentation
   Written and Presented by Johan Forrer, KC7WW

7. G-TOR: The Protocol
   Written by Mike Huslig, Phil Anderson, Karl Medcalf and Glenn Prescott
   Presented by Karl Medcalf and Mike Huslig.

8. GMON-a G-TOR Monitoring Program for PC Compatibles
   Written by Richard Huslig and Phil Anderson, W0XI; Presented by Phil
   Anderson.

9. A Theoretical Evaluation of the G-TOR Hybrid ARQ Protocol
   Written by Glenn E. Prescott, WB0SKX, And Phil Anderson, W0XI;
   Presented by Glenn Prescott

10. On Fractal Compression of Images for Narrowband Channels and Storage
    W. Kinsner, VE4WK

11. Fast CELP Algorithm and Implementation for Speech Compression
    A. Langi, VE4ARM, W. Grieder, VE4WSG, and W. Kinsner, VE4WK

12. Wavelet Compression for Image Transmission Through Bandlimited Channels
    A. Langi, VE4ARM, and W. Kinsner, VE4WK

13. ROSE X.25 Packet Switch Status Update
    Thomas A. Moulton, W2VY

14. A Primer on Reliability as Applied to Amateur Radio Packet Networks
    T.C. McDermott, N5EG

15. FSK Modem with Scalable Baud Rate
    Wolf-Henning Rech, N1EOW, and Gunter Jost, KD7WJ

16. MacAPRS: Mac Automatic Packet Reporting System-A Macintosh Version of APRS
    Keith Sproul, WU2Z, and Mark Sproul, KB2ICI

17. Formation of the TAPR Bulletin Board System Special Interest Group
    David A. Wolf, WO5H

18. How Amateur Radio Operators Can Emulate an HF ALE Radio
    David R. Wortendyke, N0WGC

19. A Preview of HF Packet Radio Modem Protocol Performance
    Teresa Young, Stephen Rieman, David Wortendyke, N0WGC

Rev. 7/22/94

3. DSP-93 Announcement

From: Greg Jones <gjones@tenet.edu>
Date: Wed, 13 Jul 1994 12:48:00 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing)
Message-ID: <199407131748.MAA01377@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

NEWS: Announcement of DSP-93 kit

Tucson Amateur Packet Radio July 12th, 1994

DSP-93
The TAPR/AMSAT Joint DSP Program

Announcement of Kit Sales

In July 1988, TAPR and AMSAT entered into the Joint DSP Program, in order to fund the development of an eventual DSP unit for amateur usage. As of the 1993 Dayton Hamvention, the direction of development was focused on a modular, standalone DSP system proposed by Bob Stricklin, N5BRG, in Dallas, Texas. The Stricklin KISS design, later renamed DSP-93, offered many of the things that the initial design goals of the project had specified. Fifteen months after the decision was made to proceed with the DSP-93 development, TAPR and AMSAT are both proud to announce that orders for kits will be taking place July 15th through August 31st for the first 150 units. The DSP-93 will be supplied as a complete kit (including box and power supply).

For those not wanting to build a kit, there are several preassembled DSP

units on the market today. Ads for these units can be found in various publications. It is our hope that the TAPR/AMSAT joint DSP-93 project will expand the use of DSP in the amateur community and become a tool for education.

DSP-93 Design

The DSP-93 is designed to provide radio amateurs the wonderful capabilities of Digital Signal Processing in a stand-alone low-cost design. Not just limited to one mode, the DSP-93 can support data, audio, and video modes with the proper software.

DSP-93 has been designed in a modular fashion with two four-layer boards utilizing an interconnecting bus structure. The basic system includes a DSP engine board and a radio/computer interface board. The DSP Engine, bottom board, contains the TMS320C25 DSP, 32K by 16 bits of program and data memory - upgradable to 64K, the clock circuitry (40Mhz) and some programmable array logic for system I/O. The Radio/Computer Interface Board, top board, contains two eight pin female mini-DIN connectors for radio interfacing. Incoming radio signals pass through a voltage divider to establish the initial levels, then through an eight channel multiplex chip. The multiplex chip then feeds the single A/D input with either of the radio inputs or one of the six auxiliary inputs. The Texas Instruments TLC32044 Analog I/O chip is used, which samples and updates at a rate of up to 45K operations per second and includes aliasing filters. This board also communicates to your computer at speeds up to 19.2K baud using a serial connection.

The modular design of the DSP-93 allows for either of these boards to be replaced with future boards designed for any number of unique applications. It's sort of like adding a new application card to a PC without redesigning the complete PC. The block diagram shows how the DSP-93 is interfaced. (see phamplet)

Basic Software Suite

The initial offering of the DSP-93 will contain the following software: 1200 baud AFSK, 300 baud AFSK, 1200 PSK, 9600 FSK terrestrial, 9600 FSK full-duplex for satellite operations, and various audio filters. These have been developed, tested, and have been in use during alpha/beta-testing.

Software currently under test, which may or may not be released with the first batch of kits include: APT, Digital Oscilloscope, SSTV, and HF modes. User interface software for DOS and Windows is also under development and testing.

Future software will be distributed on Internet, CompuServe, Amateur Satellites, and other systems, as well as being made available on disk as part of the TAPR software library. The idea of software for the DSP-93 is to make it as easy as possible to get and upgrade software in the future. Since the DSP-93 is an open architecture, it is hoped that as more amateurs get their units, more software will be developed and distributed.

Code Development

A low cost shareware assembler is available for code development. To develop code for this board, you must have good reference material. You can find numerous books on DSP algorithms and developing DSP code. The manufacturer's data sheets and books for the complex chips will also be good reference material. All the details needed to write DSP code will be supplied with the kits.

To make this project a bigger success, more people are needed who want to learn about developing DSP applications, networking, and converting from the real linear world to the digital world. Ideally, everyone taking the challenge will select a particular idea and become so focused in the application that they become the expert. Some of the areas for development might include: new modulation techniques, speech synthesis, filters, spectrum analyzers, and many more applications you will think of. If you choose to work on the hardware aspects of this project, the modular approach should allow you to convert to other DSP chips or Analog I/O chips or to add additional capability.

Future Options

High Speed Radio Interface board is a second radio interface board with higher speed analog I/O chips. In general, its functionality is just like the Radio Interface Board, except that it contains the Burr Brown DSP101 Analog to Digital converter (used for input data) and the Burr Brown DSP201 Digital to Analog converter (used for output). The A/D chip is capable of

200K samples per second with eighteen bits of resolution and the D/A chip can attain 300K updates per second with eighteen bits accuracy. No date of release or cost set.

Network Interface board is intended to support higher speed modes which require moving large amounts of data to the computer faster than a serial port can handle. A National Semiconductor ST-NIC chip was selected for the task. The ST-NIC is working in the eight bit mode. An 8K SRAM buffer is included for network packets. The DSP-93 will be able to read and write to all the registers of the ST-NIC. This high speed data interface will be an advantage when dealing with video applications. The ability to utilize the card in a network environment will be limited and is intended to work only at a netbios level with a very simple structured DSP protocol. The success of the network board will depend on the available DSP cycles left over between A/D samples after all tasks are completed. No date of release or cost set.

TNC Interface board can be placed inside the DSP-93 for the decoding of HDLC frames for packet radio applications. The board provides the basic functionality required of a TNC as a low-cost option for those that require one entire unit, instead of hooking their DSP-93 to an existing TNC at the station. No date of release or cost set.

Project Team

Much of the development and current success of the DSP-93 project can be contributed to the designers, developers, and testers. Designer: Bob Stricklin, N5BRG. Project Managers: Bob Stricklin, N5BRG and Greg Jones, WD5IVD. Joint DSP Project Officers: Robert Diersing, N5AHD (AMSAT) and Greg Jones, WD5IVD (TAPR). The Alpha-Team: Bob Stricklin, N5BRG, Frank Perkins, WB5IPM, Jon Bloom, KE3Z, Lon Cecil, WB5PKJ, Tom McDermott, N5EG, Robert Diersing, N5AHD, UoSAT/Doug Loughmiller, K05I/G0SYX, John Conner, WD0FHG, Greg Jones, WD5IVD, and Bill Reed, WD0ETZ. The Beta-Team: Jack Davis, WA4EJR, Paul Beckmann, WA0RSE, Scott Zehr, K9GKC, Ron Parsons, W5RKN, Jim Tittsler, 7J1AJH/AI8A, Michael Zingman, N4IRR, Stan Salek, KD6CVL, Mark Hammond, KC4EBR, Marcel Losekoot, Bill Beech, NJ7P, Gould Smith, WA4SXM, Roy Welch, W0SL, Greg Ratcliff, Brian Straup, NQ9Q, Doug Howard, KG5OA, and Robert Greenfield, VE3DSC.

Any of the project members welcome questions about their work and involvement. If you know someone on this list, please ask them about their unit and how it operates. Personal contact with testers is one of the best ways to determine the unit's possible usefulness in your shack. Many of the testers are active on the satellites and so they are easy to contact.

Ordering your Kit

The DSP-93 will sell for $430 as a complete kit, including enclosure and power supply.

TAPR kits can be complex depending on the kitting experience of each builder. We don't think you will have trouble with the DSP-93 kit, but it does require some knowledge and experience to successfully go from a kit to a finished, usable unit, depending on the mode of operations. For data radio applications (i.e. 9600 baud FSK), special modifications must be made to your radio for proper operation of the DSP-93. Unlike other TAPR kits in the past, only the interface to the radio and the serial cable to the computer (DB-9) will be the responsibility of the kit builder. All other parts will be in the kit ready for complete assembly.

Due to the cost of each unit, TAPR and AMSAT are unable to fund the total purchasing of inventory that may sit idle on the shelf for months. Neither organization can sustain such an investment at this time, with AMSAT Phase IIID developments and other such TAPR projects ongoing. To avoid this possibility, TAPR and AMSAT are requiring that kit purchasers provide VISA/MC information or checks/money orders with their initial purchases. Money for the initial kit purchase will be deposited on September 15th, 1994 to cover kitting costs, with kits being shipped beginning November 15th. If kits are available before November 15th, they will be shipped when available. Orders will be taken for the first 150 units. If more than 150 units are ordered, then a second or third batch will be done as soon as additional parts inventory can be purchased and kitted. In this way, the DSP-93 kit will be provided in the exact numbers required for the demand. Many of the parts in the DSP-93 are between 10-15+ weeks shipment dates and have already been ordered for delivery the end of September. After this initial kit offering, DSP-93 kits will be provided in batches as the demand warrants doing kits. The initial batch of kits will be as large as the demand requires, which we hope is large. The more the merrier!

DSP-93 orders for the initial purchase will be taken from July 15th through August 31st, 1994. Orders can be mailed to the TAPR address: 8987-309 E. Tanque Verde Rd #337, Tucson, Az, 85749-9399, call (817) 383-0000 (Office Hours: Tue-Fri, 9am-12noon, 3pm-5pm Central Time), or fax (817) 566-2544. If you have questions concerning the unit, please write or call TAPR for an information pamphlet. The pamphlet will also be made available via fax through the TAPR voice system.

Note to TAPR members: Since this is a joint project, this kit will not have a membership discount attached.

References:
Stricklin, Bob. (1994). TAPR/AMSAT Joint DSP Project: DSP-93. Proceedings of the TAPR 1994 Annual Meeting. Tucson Amateur Packet Radio Corp.

Stricklin, Bob and Greg Jones. (1993). TAPR/AMSAT DSP-93 Project. Proceedings of the 1993 AMSAT-NA. AMSAT.

Stricklin, Bob. (1993). DSP-93: The Joint DSP Program (TAPR/AMSAT). Issue #52, Fall 1993, Packet Status Register. pp. 4-5. Tucson Amateur Packet Radio Corp.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000

4. Latest Info on ARRL DCC

From: Greg Jones <gjones@tenet.edu>
Date: Mon, 11 Jul 1994 05:02:38 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing)
Message-ID: <199407111002.FAA16464@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

According to ESTEY@SKYLER.MAVD.HONEYWELL.COM:
Date: Sun, 10 Jul 1994 15:39:44 -0500 (CDT)

ARRL 13th ANNUAL DIGITAL COMMUNICATIONS CONFERENCE AUGUST 19-21

Do you operate a Digital mode (maybe Pactor, Packet, GTOR or AMTOR) now?
Do you find it difficult to keep up with the latest Digital technology?
Would you like to know more about Digital modes?
If you answered "yes" to any of these questions, then you should attend the 13th Annual ARRL Digital Communications Conference. Read on ...

The Conference will be held on August 19 - 21, 1994 at the Thunderbird Convention Center, 2201 East 78th Street in Bloomington, Minnesota. Accomodations are available at the adjacent Thunderbird Hotel, at the many Hotels and Motels located within a short distance, and also at several area RV\camper campgrounds.

Enjoy a weekend of fun learning about the latest developments in TCP/IP, PACTOR, AMTOR, PACTOR-II, CLOVER, G-TOR, PACKET, DSP, and imaging. Participate in the nine forums about DSP, new HF modes, TCP/IP, VHF/UHF networking, BBS SYSOP issues and more. A glance at the program (attached) will show many forums that will catch your interest!

One of the highlights of the conference will be the presentation of technical papers on the many aspects of digital communications throughout the day on Saturday. You will receive a copy of all papers presented.

Many demonstrations of the latest in hardware and software will be presented. When you leave, you will have an in-depth understanding of the latest digital communications advancements and techniques. The Saturday evening Technical Showcase will feature TAPR Special Interest Group meetings for BBS SYSOPs and on VHF/UHF network building and a technical paper presentation on "Low Cost HF DSP Modems" by Johan Forrer, KC7WW.

The Hospitality Room will provide the place to meet old friends ... and make new ones. At the Saturday luncheon you will get to know "who's who" in digital communications. Meet the Engineering staff of manufacturers like Kantronics and Timewave Technologies. The optional Saturday evening diner will provide another opportunity to make new friends.

If you want a break from the Conference, the Mall of America, with hundreds of unique stores, is located within easy walking distance. Your family will

enjoy Knott's Camp Snoopy theme park inside the Mall. The renowned Minnesota Zoo is only a short drive away.

The Conference registration fee is $45 per person, which includes admission to all Conference activities, a luncheon buffet and a copy of the technical papers. An optional Saturday evening buffet is $20 per person additional. Registration deadline is August 12th.

For more information about the Conference or special Airline and Motel discounts call or write:

ARRL Digital Communications Conference
C/O Paul Ramey WG0G
16266 Finland Avenue
Rosemount, MN 55068
Packet: WG0G@WA0CQG.#MSP.MN.USA.NA
Telephone: (612) 432-1640

The host organization for the 1994 ARRL Digital Communications Conference is the TwinsLAN Amateur Radio Club.

See YOU at the Digital Communications Conference August 19-21!

13th ANNUAL ARRL DIGITAL COMMUNICATIONS CONFERENCE
PRELIMINARY PROGRAM

Friday, August 19

TIME	ROOM	EVENT
Noon - 6 PM	TBD	ARRL "Future Modes" Committee meeting.
Noon - 6 PM	TBD	ARRL "219-MHz" Committee meeting.
4 - 10 PM	Menominee	Conference check-in.
6 PM - 11 PM	Menominee	Hospitality & Demo area open

Saturday, August 20

TIME	ROOM	EVENT
6:30 - Noon	Menominee	Hospitality & Demo area open
7:00 - Noon	Menominee	Conference Check-in.
8:00 - 8:15 AM	Miami	Conference "Welcome"
8:30 - 10:00 AM	Miami	Technical Paper Presentation
8:30 - 10:00 AM	Yakima	Forum - Developments in DSP For the Amateur.
8:30 - 10:00 AM	Shoshone	Forum - TCP/IP - What's next?
10:00 - 10:15 AM	All	Break
10:15 - 11:45 AM	Miami	Technical Paper Presentation
10:15 - 11:45 AM	Yakima	Forum - ARRL Committee Updates: "Future Modes": Moderator - Paul Rinaldo W4RI and "219-MHz Networking": Moderator - Tod Olson K0TO"
10:15 - 11:45 AM	Shoshone	Forum - Digital Data (Voice and Image) Transmission Method Developments.
11:45 - Noon AM	All	Break
Noon - 1:00 PM	Miami	Buffet Luncheon (Included)
1:00 - 5:30 PM	Menominee	Hospitality & Demo area open
1:15 - 2:45 PM	Miami	Technical Paper Presentation
1:15 - 2:45 PM	Yakima	Forum - High-Speed (above 1200 baud) data transfer methods and networking techniques.
1:15 - 2:45 PM	Shoshone	Forum - HF Data Transmission Methods - An Over-view of Current Modes and What's Coming Next.
2:45 - 3:00 PM	All	Break
3:00 - 4:30 PM	All	Continuation of all sessions
5:30 - 6:30 PM	Miami	Buffet Diner (Optional)
7:00 - 11:00 PM	Menominee	Hospitality & Demo area open
7:00 - 10:00 PM	Miami	Tucson Amateur Packet Radio (TAPR) Presents Special Interest Groups: - Packet BBS SYSOPs - VHF/UHF Network Building
7:00 - 10:00 PM	Yakima	American Digital Radio Society (ADRS)presents a technical presentation: "Low-cost HF DSP Modems" by

Johan Forrer, KC7WW

Sunday, August 21

TIME	ROOM	EVENT
8:30 - Noon	Menominee	Hospitality & Demo area open
10:00 - 11:00	Menominee	Conference wrap-up and close.

Rev. 7/8/94

August 1994

Original source file: tapr-bb.9408
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1994-08/TAPR-BB_1994-08.txt

1. The spectrum beat goes on.....

From: Greg Jones <gjones@tenet.edu>
Date: Thu, 11 Aug 1994 19:29:06 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing)
Message-ID: <199408120029.TAA19024@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

According to dewayne@odo.tetherless.com:
Date: Wed, 10 Aug 1994 22:04:51 -0800

Report No. GN- GENERAL ACTION August 9, 1994

FCC RELEASES REPORT REGARDING REALLOCATION
OF SPECTRUM FROM FEDERAL GOVERNMENT

The FCC today released a report to the Secretary of the U.S. Department of Commerce regarding the Department's Preliminary Spectrum Reallocation Report (Preliminary Report).

On August 10, 1993, Congress adopted the Omnibus Budget Reconciliation Act of 1993(Reconciliation Act), which directed the Secretary of Commerce to identify at least 200 megahertz of spectrum currently allocated on a primary basis for Federal Government use, which is most likely to have the greatest potential for productive uses and public benefit if allocated for non-Federal use. On February 10, 1994, the Secretary of Commerce released a Preliminary Report produced by the National Telecommunications and Information Administration (NTIA) identifying 200 megahertz of spectrum for reallocatin from Federal Government to private sector use. The public was then afforded an opportunity to comment on the Preliminary Report. The Reconciliation Act requires that, 90 days from the end of the public comment period, the Commission submit to the Secretary of Commerce an analysis of the public comments, along with any comments or recommendations it deems appropriate. The report released today satisfies this requirement. The Department of Commerce must now consider the public comments and the Commission's report and submit to the President and Congress by February 10, 1995, a final report identifying and recommending spectrum for reallocation.

In its report, the Commission concludes that the Department of Commerce has complied with the reallocation criteria imposed by Congress. However, the Commission also believes that relatively minor changes to the reallocation plan presented in the Preliminary Report could provide even greater benefits to the public. The Commission notes that parties filing comments praised NTIA for its efforts, but stated that the proposals made in the Preliminary Report could be enhanced by some modifications to better satisfy the public's requirements.

(over)

-2-

In addition to providing an analysis of the comments, the Commission's report provides a discussion of a supplemental spectrum reallocation plan that it believes will enhance the viability of the reallocated spectrum for commercial and local governmental use. In particular, the Commission recommends that in preparing its final report NTIA should seek to provide larger blocks of spectrum required to accommodate high volumes of communications and the wide bandwidths necessary to accommodate emerging technologies and transmit communications such as voice and video. It also notes that the private sector would benefit from blocks of spectrum that could be readily paired and used to accommodate emerging technologies such as mobile satellite service.

Action by the Commission August xx, 1994, by Report (FCC 94-
///). Chairman , Commissioners

-FCC-

News Media contacts: Susan Sallet and Patricia A. Chew at (202) 418-0500.
Office of Engineering and Technology contact: Steve Sharkey at (202) 653-8151.

2. FCC Changes

From: Greg Jones <gjones@tenet.edu>
Date: Thu, 11 Aug 1994 19:28:25 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing)
Message-ID: <199408120028.TAA19018@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

According to dewayne@odo.tetherless.com:
Date: Wed, 10 Aug 1994 22:04:35 -0800

August 1, 1994

FCC ANNOUNCES ORGANIZATIONAL CHANGES

Chairman Reed E. Hundt today announced the Commission's intention to make the following organizational changes: create a Wireless Telecommunications Bureau; create an International Bureau; create an Office of Workplace Diversity; create a Competition Division in the Office of General Counsel; and move the Office of Small Business Activities out of the Office of Managing Director and have it report directly to the Commission.

Hundt first announced the changes in a 10:30 a.m. meeting with FCC employees in the Commission hearing room. That meeting was also broadcast over the Commission's internal television system.

"The two biggest organizational changes we propose today are the creation of a Wireless Telecommunications Bureau and an International Bureau," Hundt said. "My initial sense that a Wireless Bureau was necessary was confirmed by last week's phenomenally successful spectrum auctions. A Bureau dedicated to the mission of wireless services will ensure that we remain on track with the licensing of PCS and with other emerging technologies. In addition, the issues facing the communications industry are almost never without international implications. Our International Bureau will better meet the challenges ahead as the FCC continues its role in international telecommunications, working with the Department of State and NTIA in the promotion of the Global Information Infrastructure."

Hundt also noted that many of the organizational changes are the result of suggestions from employees made directly to the Chairman or to Mary Beth Richards, Special Counsel to the Commission for Reinventing Government. This includes, for example, the Office of Workplace Diversity, which will report directly to the Chairman and other Commissioners and will handle the Commission's internal EEO program.

"It is a very exciting time to be at the Commission," Hundt added. "The work we do is vital to American businesses, consumers and even to school children. It is my hope that the organizational changes we announce today will help us meet our goal of serving these customers with efficiency and excellence, in the public interest."

Chairman Hundt announced the Commission's intention to make the following appointments as part of the agency's reorganization plan:

Regina Keeney, Chief of the new Wireless Telecommunications Bureau. She currently is the minority counsel for the Senate Committee on Commerce, Science and Transportation.

Ralph A. Haller and Gerald P. Vaughan, Deputy Chiefs, Wireless Telecommunications
Bureau. Haller is the Chief of the Private Radio Bureau, while Vaughan is Deputy Chief of the Common Carrier Bureau.

Scott Blake Harris, Chief of the new International Bureau. Currently, he is the Chief of the Office of International Communications.

Roderick K. Porter, Deputy Chief, International Bureau. Porter is Deputy Chief of the Mass Media Bureau.

Anthony L. Williams will head the newly reorganized Office of Small Business Activities.
He is the Vice President of W&J Management Company, Inc., which manages a group of telecommunication venture capital funds.

Thomas P. Stanley, reassigned as Chief Engineer from the Office of Engineering and Technology to the Office of Plans and Policy.

Richard M. Smith, Chief, Office of Engineering and Technology. He currently heads the Field Operations Bureau.

Beverly Baker, Chief, Field Operations Bureau. She will be reassigned from her current position as Deputy Chief of the Private Radio Bureau.

John Winston, Assistant Chief of the Field Operations Bureau. He currently serves as Chief
of the Office of Small Business Activities within the Office of the Managing Director.

Kathleen M.H. Wallman, Chief of the Common Carrier Bureau. She will be reassigned from her position as Deputy Chief, Cable Services Bureau.

A. Richard Metzger, a Deputy Chief, Common Carrier Bureau. He has been serving as the Acting Chief of that Bureau.

Gregory J. Vogt, Deputy Chief, Cable Services Bureau. Vogt will be reassigned from his
position as Chief of the Tariff Division, Common Carrier Bureau. William H. Johnson, Deputy Chief for Policy, Cable Services Bureau. Johnson is being reassigned from his position as Deputy Chief of the Mass Media Bureau.

Renee I. Licht, Deputy Chief, Mass Media Bureau. She is currently serving in that position on an acting basis.

James Olson, Chief of the newly created Competition Division in the Office of the General Counsel. Serves in same position in the Cable Services Bureau.

Robert A. Peck, a Deputy Chief, Office of Legislative Affairs. He is Group Vice President, Government Affairs, for The American Institute of Architects.

Patricia Grace Smith, a Deputy Chief of the recently reorganized Office of Public Affairs.
She was the Acting Associate Managing Director - Public Information and Reference Services within the Office of the Managing Director.

An organizational chart of the proposed changes is attached. The reorganization will
become effective once formal Commission, Congressional and Union approval has been obtained.

3. TAPR to make available ARRL CNC and DC Proceeding

From: Greg Jones <gjones@tenet.edu>
Date: Mon, 1 Aug 1994 18:11:27 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing)
Message-ID: <199408012311.SAA07877@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

SB TAPR @ TAPR $TAPR801.001
NEWS: TAPR to make available ARRL CNC and DC Proceedings

Please use BID: $TAPR801.001

Tucson Amateur Packet Radio August 1st, 1994

TAPR to make available ARRL CNC and DC Proceedings

TAPR has arranged an agreement with the ARRL to be the distribution point of past proceedings of the ARRL Computer Networking Conferences and Digital Conferences. This will apply to proceedings that are more than two years old. For example, the ARRL will continue to distribute the 12th (1993) and 13th (1994) proceedings this year, then next year TAPR will begin to distribute the 12th (1993).

In this way, TAPR and the ARRL hopes that these proceedings will be fully available to digitally interested hams. Proceedings should be available from the TAPR office the end of August.

TAPR would like the thank Mark Wilson, AA2Z, and Jon Bloom, KE3Z, for
their help at the ARRL with this arrangement.

There has been interest in having many of the papers available in
electronic form. TAPR will begin to work on contacting authors for
premission to generate computer versions of many of the papers.
If you are an author of an ARRL CNC or DC proceedings paper and would
like to give TAPR premission to make available your paper electronically,
please send e-mail to tapr@tapr.org. If you have the paper in electronic
form already, please send that also. More on this project as it forms.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000

/EX

September 1994

Original source file: tapr-bb.9409
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1994-09/TAPR-BB_1994-09.txt

1. IMPORTANT - TAPR-BB RELOCATION

From: Greg Jones <gjones@tenet.edu>
Date: Sun, 4 Sep 1994 20:09:16 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing)
Message-ID: <199409050109.UAA01328@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

```
****                            ****
****  IMPORTANT -- PLEASE READ  ****
****                            ****


NETSIG, BBSSIG, and TAPR-BB Relocation
--------------------------------------

The NETSIG, BBSSIG, and TAPR-BB mail lists will be relocating back to their
permanent home on TAPR.ORG.

These lists were moved to TCET.UNT.EDU after a mail problem with our host
feed in Tucson during June.  The TAPR.ORG system has been moved to a
permanent Internet location, which no longer presents this problem.  With
the creation of the new TAPR.ORG system, we are working on consolidating
TAPR information feeds.

In addition, the new listproc software works much more reliably than the
current hacked software that was done to maintain the current lists.

These lists (located on TCET) will be phased out on Friday Sept 16th.
Messages posted, after Wednesday, Sept 7th, will be forwarded to the new
lists located @tapr.org.

Due to a difference between how the current and new list software operate,
subscribers will need to subscribe to the relocated lists.


subscribe
---------
To subscribe to the relocated mail lists send a message to
`listserv@tapr.org` with the following line(s) in the body of the message:

subscribe list full_name

Example:
subscribe bbssig FirstName LastName
subscribe netsig FirstName LastName
subscribe tapr-bb FirstName LastName

Note:  The Listproc uses the From: line of the incoming mail subscription to
set the return e-mail path.  If you have to support something other than
what is sent in your From: line, please send mail to wd5ivd@tapr.org and let
me know what needs to be supported.  If you have more than one mil address
you send messages from, you will need to send those to wd5ivd@tapr.org to
add those as aliases to your entry.


unsubscribe
-----------
There is no need to unsubscribe from the TCET mail lists.  This information
is for later reference.  To unsubscribe later from the mail lists send a
message to `listserv@tapr.org` with the following line in the body of the
message:

signoff bbssig
signoff netsig
signoff tapr-bb


Archives
--------
Past messages from the mail lists are available in the TAPR.ORG archives.
Send mail to `listserv@tapr.org` with the following in the message body:
```

index tapr/mail_list

Examples:
index tapr/netsig
index

Help

To get help, send mail to `listserv@tapr.org` with `help` in the message
body. The new Listproc software does a lot of things that our previous and
current software did not support.

If you have any questions or concerns, send mail to wd5ivd@tapr.org

---
Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000

2. TAPR.ORG Change

From: Greg Jones <gjones@tenet.edu>
Date: Fri, 2 Sep 1994 17:48:20 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing)
Message-ID: <199409022248.RAA29023@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

The location of TAPR.ORG was changed today.

The current TAPR.ORG system is now residing on a full-access Internet link,
which should improve preformace and access.

This change will allow the new server to contain all the TAPR Internet
functions at one site. Currently we are using three different sites, which
has caused a little confusion.

The system will be under final test with the several smaller mail lists and
file-request for the next few weeks before we move the current mail
lists on TCET.UNT.EDU to TAPR.ORG. An announcement will be before
the SIG relocation.

If you have problems getting to TAPR.ORG by e-mail, there could be up to 8
days before some sites have the updated information.

A full set of information and directions will be posted in the next week
concerning the new software system.

If you have any questions, mail can be sent to gjones@tenet.edu

Greg

President -- Tucson Amateur Packet Radio Corp

TAPR Office (817) 383-0000 | Internet: gjones@tenet.edu
---

3. PSR Deadline Issue #56

From: Greg Jones <gjones@tenet.edu>
Date: Fri, 2 Sep 1994 17:39:54 -0500 (CDT)
To: tapr-bb@tcet.unt.edu (TAPR-BB mailing)
Message-ID: <199409022239.RAA28865@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

Deadline for the next issue of the TAPR PSR will be September 15th, 1994.

Please driect any articles or information to psr@tapr.org or
bobh@tcet.unt.edu.

TAPR is looking for any technical articles yo umight have on current or
ongoing projects. In addition, the focus of the next issues will be BBS
issues, so if you have something for that, please submit it.

Also, TAPR still has an open invitation to any Regional Packet Group that
wishes to submit information regading regional activity.

Cheers - Greg

```
------------------------------------------------------------------------------
President -- Tucson Amateur Packet Radio Corp
------------------------------------------------------------------------------
TAPR Office (817) 383-0000  | Internet: gjones@tenet.edu
------------------------------------------------------------------------------
```

4. Yep - I think it is :-)

```
From: Greg Jones <gjones@tenet.edu>
Date: Sun, 4 Sep 1994 18:16:22 -0500 (CDT)
To: tapr-bb@tapr.org
Message-ID: <199409042316.SAA27576@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain
```

```
Sender: lcz (Lee Ziegenhals)
Subject: Is this list really moderated?

Now is the time for all foxes to jump over the lazy dog.
```

5. Re: Is this list really moderated?

```
From: Greg Jones <gjones@tenet.edu>
Date: Sun, 4 Sep 1994 18:20:34 -0500 (CDT)
To: tapr-bb@tapr.org
Message-ID: <199409042320.SAA27685@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain
```

```
Well - Finally got it to work...let see if it posts it directly from me.

Greg

According to Lee Ziegenhals:
> From tapr-bb@tapr.org Sun Sep  4 18:19:15 1994
> Received: from dptspd.sat.datapoint.com (dptspd.sat.datapoint.com [130.137.64.2]) by
Paula-Formby.tenet.edu (8.6.9/8.6.9) with SMTP id SAA27993 for <gjones@tenet.edu>; Sun, 4 Sep 1994
18:19:14 -0500
> Received: from dptspd.sat.datapoint.com by dptspd.sat.datapoint.com with smtp
>       (Smail3.1.28.1 #2) id m0qhQq8-0000PUa; Sun, 4 Sep 94 18:19 CDT
> Date: Sun, 4 Sep 94 18:19 CDT
> Message-Id: <199409042316.SAA27576@Kay-Abernathy.tenet.edu>
> Errors-To: gjones@tenet.edu
> Reply-To: tapr-bb@tapr.org
> Originator: tapr-bb@tapr.org
> Sender: tapr-bb@tapr.org
> Precedence: bulk
> From: lcz (Lee Ziegenhals)
> To: tapr-bb@tapr.org
> Subject: Is this list really moderated?
> X-Listprocessor-Version: 6.0c -- ListProcessor by Anastasios Kotsikonas
> Content-Length: 1352
> Content-Type: text
> X-Mailer: ELM [version 2.4 PL23]
>
> Now is the time for all foxes to jump over the lazy dog.
>
>
>
>
```

6. TAPR.ORG Archives

```
From: Greg Jones <gjones@tenet.edu>
Date: Sat, 17 Sep 1994 19:00:59 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199409180001.TAA22113@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain
```

```
The archives on TAPR currently include the following files:

Subarchive: tapr (path: tapr) -- Files:
  taprinfo.txt (1 part, 3068 bytes) -- Info on TAPR and its goals, etc..
  pricelst.txt (1 part, 7234 bytes) -- Price list for items available from TAPR
  disks.txt (1 part, 10765 bytes) -- TAPR software library listing
  psr53.zip (1 part, 59608 bytes) -- PSR #53 - Winter 1994 - ZIP format

Subarchive: packet (path: tapr/packet) -- Files:
  ax25.doc (1 part, 64996 bytes) -- Docs AX.25 Amateur Packet Radio Link Layer P
  kiss.txt (1 part, 19363 bytes) -- Info on KISS TNC Host to TNC Comm. Protocol
  gateway.net (1 part, 1600 bytes) -- How to use the WB7TPY Packet <-> Internet
  tnc2kiss.hex (1 part, 4916 bytes) -- KISS EPROM Code for TNC-2
```

```
  tnc2host.zip (3 parts, 65495, 65534, 18442 bytes) -- Host mode software for
      TNC-2 with 1.1.8a firmware
  tnc2doc.zip (3 parts, 65494, 65534, 37340 bytes) -- System Manual for TNC-2
  tnc2118a.zip (1 part, 41211 bytes) -- TAPR TNC-2 firmware, Ver. 1.1.8a
  tnc1kiss.zip (1 part, 65387 bytes) -- KISS host to TNC Protocol for TAPR TNC-1 & clones
  ax25drv.zip (2 parts, 65494, 780 bytes) -- AX25 driver for BAYCOM-like modem

Subarchive: kits (path: tapr/kits) -- Files:
  taprkits.txt (1 part, 16711 bytes) --Complete info on kits available from TAPR
  9600modm.txt (1 part, 3163 bytes) -- Info on the 9600 baud TAPR Modem
  dcdinfo.txt (1 part, 4067 bytes) -- Info on DCD Mods, State Machine & XR-2211
  devmeter.txt (1 part, 1911 bytes) -- Info on TAPR Deviation Meter Kit
  metcon.txt (1 part, 2959 bytes) -- Info Remote Telemetry & Control Kit
  pk232.txt (1 part, 2187 bytes) -- Info on PK-232MBX & PK232 Modem Disconnect Kits
  32k.txt (1 part, 1320 bytes) -- How to upgrade the TNC-2 to 32k RAM
  pskmodem.txt (1 part, 2765 bytes) -- Info on TAPR PSK Modem Kit
  tnc2pcb.txt (1 part, 1227 bytes) -- Info on the TAPR TNC-2 printed ckt board
  dsp93.txt (1 part, 11469 bytes) -- Announcement of DSP-93 Kit

Subarchive: utility (path: tapr/utility) -- Files:
  uudecode.bas (1 part, 5572 bytes)
  uudecode.dbg (1 part, 4298 bytes)
  uudecode.doc (1 part, 1985 bytes)

Subarchive: lists (path: tapr/lists) -- Files:

Subarchive: tapr-bb (path: tapr/lists/tapr-bb) -- Files:
  sep.94 (1 part, 2682 bytes) -- IMPORTANT - TAPR-BB RELOCATION
  jun.94 (1 part, 54357 bytes) -- FCC HF Digital NPRM
  jul.94 (1 part, 30699 bytes) -- Stolen
  aug.94 (1 part, 12594 bytes) -- The spectrum beat goes on.....

Subarchive: dsp-93 (path: tapr/lists/dsp-93) -- Files:
  sep.94 (1 part, 7378 bytes) -- TCET Down

Subarchive: bbssig (path: tapr/lists/bbssig) -- Files:
  sep.94 (1 part, 87594 bytes) -- Hierarchical Addressing Protocol
  hierarchical (1 part, 10485 bytes) -- BBSSIG Hierarchical Addressing Protocol Recommendation
  may.94 (1 part, 20813 bytes) -- F6FBB software Bug
  jul.94 (4 parts, 65481, 65533, 65533, 53207 bytes) -- Re: NOAM vs NA -- Let's SOLVE the problem!
  aug.94 (5 parts, 65506, 65517, 65515, 65524, 33984 bytes) -- Re: NOAM vs NA -- Let's SOLVE the
problem!

Subarchive: netsig (path: tapr/lists/netsig) -- Files:
  sep.94 (1 part, 2747 bytes) -- Re: TAPR-2 TNC Mods; Bit
  may.94 (2 parts, 65518, 17851 bytes) -- Re: Perfect Network...
  jun.94 (7 parts, 65502, 65530, 65506, 65439, 65515, 65502, 20727 bytes) -- Re: Proposed "Call for
Papers" for Networking Book
  jul.94 (10 parts, 65500, 65502, 65533, 65530, 65517, 65521, 65518, 65471, 65531, 40265 bytes) -- Bit
Regeneration
  aug.94 (4 parts, 65535, 65516, 65509, 19344 bytes) -- RE: A new question

---

files are retrived by the command

get archive filename

message should be sent to listserv@tapr.org
```

7. TAPR Bulletins TAPR916.001 - .003

```
From: Greg Jones <gjones@tenet.edu>
Date: Sun, 18 Sep 1994 21:51:42 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199409190251.VAA17202@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

SB TAPR @ ALLUS $TAPR916.001
NEWS: Nominations Sought for TAPR Board of Directors

Please use BID: $TAPR916.001

Tucson Amateur Packet Radio  9/16/94

TAPR is governed by a 9-member Board of Directors.  Each member of
the Board serves a three year term. Three positions are up for
election.

Board members are expected to attend the annual Board meeting
```

held in conjunction with the annual meeting. They participate
in the decision-making process and provide guidance to the
officers. They receive no pay and must defray their own
expenses to attend meetings. Board members should be prepared
to be active in the continuing Board deliberations, which are
conducted via the Internet. Active participation in TAPR
activities by Board members is important to the furtherance of
the objectives of TAPR. The officers of TAPR are elected by the
members of the Board at the annual Board of Directors meeting.

To place a person in nomination, please remember that he or she must be
a member of TAPR. Confirm that the individual is willing to have their name
placed in nomination. Send that person's name (or your own if you wish to
nominate yourself) along with your call and their call, telephone numbers,
mailing address, and Internet address. The person nominated should submit a
short biographical sketch to be published along with the ballot.

Nominations and biographical sketches should be submitted to the TAPR
office no later than December 10th, 1994.

More details may be obtained by contacting headquarters:
Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000

/EX

SB TAPR @ TAPR $TAPR916.002
NEWS: TAPR 1995 Annual Meeting

Please use BID: $TAPR916.002

Tucson Amateur Packet Radio   September 16th, 1994

            TAPR 1995 Annual Meeting, March 3rd, 4th, & 5th

TAPR 1995 Annual Meeting

March 3rd, 4th, & 5th, in St. Louis, Mo.
Hosted by MoAmPS (Missouri Amateur Packet Society)

Join some of the brightest and most enthusiastic of today's packet
developers/users, with a weekend full of Packet Radio and Digital
Communications talks, presentations, SIG meetings, and two SPECIAL Sunday
Workshops. In addition an advanced DSP symposium is planned for Friday
afternoon and evening for software developers of DSP systems.

TAPR (Tucson Amateur Packet Radio), a non-profit research and development
corporation, works on the advancement of digital communications and
education. This year's annual meeting will be the first held outside of
Arizona and presents a unique opportunity for those unable to travel to
Tucson to attend meetings.

An advanced DSP (digital signal processing) symposium will be held Friday,
March 3rd. This is for those working with DSP technology currently, and
not a session for introductory topics.

The annual meeting formally begins Saturday morning with presentations
and papers, as well as discussion on other projects of interest throughout
the day. Issues concerning packet networking and BBS operation are also
anticipated. A banquet will be held Saturday evening and will include a
prize drawing. After dinner, Special Interest Groups will meet and discuss
issues.

On Sunday, two workshops will be held. One will focus on Error Correction
Techniques, by Phil Karn, KA9Q, while the second will focus on development
of software/hardware for the TAPR/AMSAT DSP-93, by Bob Stricklin, N5BRG, and
Frank Perkins, WB5IPM.

These are exciting times for digital communications and TAPR. This year's
meeting should be a super-charging event for everyone who can attend!

Call for Papers
Papers are welcome from everyone. Although there is limited time during the
weekend, all attempts will be made to allow those present to talk. Deadline
for submission of papers is Monday, February 7th, 1995. Contact the TAPR
office to request an author's information package.

Meeting Place and Hotel

The TAPR Annual Meeting presentations, meetings, and workshops, will be held at the St. Louis Community College at Florissant Valley. Lodging will be at the Henry VIII Hotel and Conference Center, 4690 North Lindberg Blvd, St. Louis (Bridgeton), MO, 63044, Phone (lots of them): 800-325-1588, 800-392-1660 (in MO. only), 314 731-3040, or FAX 314 731-4210. Rooms rates are reasonable. It is approximately 4 miles west of St Louis Lambert Airport with shuttle service and approximately 10 miles (all freeway) from the college. A block of 50 rooms will be held until February 4th, at which time those rooms will be released for general booking. If you are planning to stay at the hotel, it is highly recommended that you book your room prior to February 4th, 1994.

For full details on Registration and Workshops contact TAPR.

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/EX

SB TAPR @ TAPR $TAPR916.003
NEWS: TAPR HF SIG Formed

Please use BID: $TAPR916.003

Tucson Amateur Packet Radio September 16th, 1994

Introduction of the TAPR HF Special Interest Group

Objectives for the HFSIG

The purpose of the HF SIG is to serve as a forum for those involved in experimenting, and developing digital applications for HF.

Background

HF offers unique challenges and rewarding opportunities for amateur radio - it allows for both short and long distance digital communications without the involvement of specialized terrestrial or space-based equipment such as repeaters, or satellite transponders. It allows for one-to-one (keyboard-to-keyboard), as well as many-to-one (networking), modes of operation. These are quite different in philosophy and functional needs.

The amateur bands have seen a dramatic increase in diversity in technology as well as increased activity in the use of digital modes. This is due mostly to the availability of TNCs and application of personal computers. Basic technology, however, has not changed much since the 60's and is in great need for innovation to meet future challenges.

Development of future technology for HF digital requires experimentation with several topics on communications such as:

1. Bandwidth-efficient modulation schemes, i.e. for increased robustness, speed, and usability. These include various forms of m-ary FSK, m-ary PSK, or QAM using single or multiple carriers. However, other technologies such as spread-spectrum communications also need to be explored.

2. Application of coding theory for error detection and correction for increased reliability. This will require the use of block and/or convolutional codes.

3. Protocols to suit new proposed modulation and coding schemes. Various forms of ARQ and FEC are possible. The possibilities for half and full duplex modes need to be explored.

In addition, development platforms for such experimental work will most certainly receive attention.

4. Programmable DSP platforms. Hardware, and software for application development.

5. Host-based software. Typically this includes low-level I/O, CUA/SAA compliant user-interface development, but also a user-contributed software repository for commonly-used algorithms such as frame synchronization, channel

equalization, scrambler polynomials, fast CRC calculations,
various error-detection/correction algorithms such as Golay
(24,12), Reed-Solomon, and trellis/Viterbi codes for
example.

Getting involved

We require talents representing a wide range of topics such as mathematics (coding theory, signals and transforms), software engineering (algorithm development, real-time OS, low-level I/O, host OS), electrical engineering (analog, digital and RF), digital signal processing (theoretical, hardware and software), etc. However, there also is a similar need for technical writers, beta testers, and project management.

It is unlikely that this type of experimental work will be using any existing TNC hardware. A general-purpose programmable DSP platform, such as the TAPR DSP-93, a DSP-based sound card, or equivalent would be required as well as a fairly fast 386/486 or equivalent host computer for high-level software development.

Besides development efforts, there will be ongoing on-the-air testing to establish how well theoretical ideas are working in practice. It is envisaged that there would be rapid evolution of modulation and protocol development and thus the need for fully programmable hardware.

This introductory note is probably incomplete, however, it presents some perspective and direction for the HFSIG. I would appreciate further suggestions and feedback.

Subscribing

To subscribe to this mailing list send a message to `listserv@tapr.org` with the following line in the body of the message:

subscribe list full_name

Example:
subscribe hfsig FirstName LastName

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000

/EX

8. TAPR Bulletins TAPR916.001 - .003

From: Greg Jones <gjones@tenet.edu>
Date: Sun, 18 Sep 1994 22:41:13 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199409190341.WAA18130@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

SB TAPR @ ALLUS $TAPR916.001
NEWS: Nominations Sought for TAPR Board of Directors

Please use BID: $TAPR916.001

Tucson Amateur Packet Radio 9/16/94

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Board members are expected to attend the annual Board meeting held in conjunction with the annual meeting. They participate in the decision-making process and provide guidance to the officers. They receive no pay and must defray their own expenses to attend meetings. Board members should be prepared to be active in the continuing Board deliberations, which are conducted via the Internet. Active participation in TAPR activities by Board members is important to the furtherance of the objectives of TAPR. The officers of TAPR are elected by the members of the Board at the annual Board of Directors meeting.

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Tucson Amateur Packet Radio   September 16th, 1994

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On Sunday, two workshops will be held. One will focus on Error Correction Techniques, by Phil Karn, KA9Q, while the second will focus on development of software/hardware for the TAPR/AMSAT DSP-93, by Bob Stricklin, N5BRG, and Frank Perkins, WB5IPM.

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/EX

SB TAPR @ ALLUS $TAPR916.003
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Please use BID: $TAPR916.003

Tucson Amateur Packet Radio September 16th, 1994

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The amateur bands have seen a dramatic increase in diversity in technology as well as increased activity in the use of digital modes. This is due mostly to the availability of TNCs and application of personal computers. Basic technology, however, has not changed much since the 60's and is in great need for innovation to meet future challenges.

Development of future technology for HF digital requires experimentation with several topics on communications such as:

1. Bandwidth-efficient modulation schemes, i.e. for increased robustness, speed, and usability. These include various forms of m-ary FSK, m-ary PSK, or QAM using single or multiple carriers. However, other technologies such as spread-spectrum communications also need to be explored.

2. Application of coding theory for error detection and correction for increased reliability. This will require the use of block and/or convolutional codes.

3. Protocols to suit new proposed modulation and coding schemes. Various forms of ARQ and FEC are possible. The possibilities for half and full duplex modes need to be explored.

In addition, development platforms for such experimental work will most certainly receive attention.

4. Programmable DSP platforms. Hardware, and software for application development.

5. Host-based software. Typically this includes low-level I/O, CUA/SAA compliant user-interface development, but also a user-contributed software repository for commonly-used algorithms such as frame synchronization, channel equalization, scrambler polynomials, fast CRC calculations, various error-detection/correction algorithms such as Golay (24,12), Reed-Solomon, and trellis/Viterbi codes for example.

Getting involved

We require talents representing a wide range of topics such as mathematics (coding theory, signals and transforms), software engineering (algorithm development, real-time OS, low-level I/O, host OS), electrical engineering (analog, digital and RF), digital signal processing (theoretical, hardware

and software), etc. However, there also is a similar need for technical writers, beta testers, and project management.

It is unlikely that this type of experimental work will be using any existing TNC hardware. A general-purpose programmable DSP platform, such as the TAPR DSP-93, a DSP-based sound card, or equivalent would be required as well as a fairly fast 386/486 or equivalent host computer for high-level software development.

Besides development efforts, there will be ongoing on-the-air testing to establish how well theoretical ideas are working in practice. It is envisaged that there would be rapid evolution of modulation and protocol development and thus the need for fully programmable hardware.

This introductory note is probably incomplete, however, it presents some perspective and direction for the HFSIG. I would appreciate further suggestions and feedback.

Subscribing

To subscribe to this mailing list send a message to `listserv@tapr.org` with the following line in the body of the message:

subscribe list full_name

Example:
subscribe hfsig FirstName LastName

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/EX

9. NEWS: ARRL DCC/CNC Article Index

From: Greg Jones <gjones@tenet.edu>
Date: Tue, 20 Sep 1994 14:33:36 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199409201933.OAA22549@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

SB TAPR @ ALLUS $TAPR920.001
NEWS: ARRL DCC/CNC Article Index

Please use BID: $TAPR920.001

Tucson Amateur Packet Radio   September 20th, 1994

                  ARRL DCC and CNC Reference of Article

You can request a complete list of articles that have been published in all past proceedings of the ARRL Computer Networking Conferences and Digital Communication Conferences from the TAPR.ORG listserv.

This reference list is in CSV (Comma Separated Values Format) that allows reading into most popular spreadsheet programs. It is organized by conference/paper and list the paper, authors, and page number.

This should provide a handy listing for those that are looking for articles in the CNC or DCC. The ARRL has proceedings 12 and 13. TAPR now has all previous proceedings.

Subarchive: tapr (path: tapr) -- Files:
  dcc.ref (30687 bytes) -- ARRL DCC and CNC Ref of Articles. CSV Format.

To request this file, send a message to 'listserv@tapr.org' and in the main message body indicate:

get tapr dcc.ref

To receive a full index, send a message to 'listserv@tapr.org' and include:

index -all

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/EX

10. Bulletin TAPR922.001 - 002

From: Greg Jones <gjones@tenet.edu>
Date: Thu, 22 Sep 1994 06:56:00 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199409221156.GAA26742@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

SB TAPR @ ALLUS $TAPR922.001
NEWS: Part 1: 13th ARRL DCC

Please use BID: $TAPR922.001

Tucson Amateur Packet Radio September 22nd, 1994

13th ARRL Digital Communications Conference

Compiled by Greg Jones, WD5IVD, TAPR

The 13th ARRL Digital Communications Conference was held in Bloomington, Minn, on August 19-21, 1994, hosted by the TwinsLAN ARC. The conference was attended by approximately 150 and was one of the best in the last few years. Amateurs from twenty states and seven nations were present. A change was made in the organization of the overall conference, which resulted in three strands running through the entire conference. This format allowed for the numerous special interests to have time during the conference to discuss issues. The conference seems to have moved more to specialization and away from generalization as was the presentation format in the early conferences.

Due to the number of sessions, each of the moderators was asked to write up a short overview of what happened during their session or forum. The full writeup of the conference will appear in the next issue of the TAPR PSR. The following information shows each of the break-out sessions (without full text) as well as a brief review of each of the technical paper sessions. Conference Proceedings are available from the ARRL and past Proceedings of the Digital Conference are available from TAPR.

The ARRL Future Committee met Friday. You can contact the ARRL for the minutes. The ARRL Digital Committee did not meet at the conference. Friday evening, registration opened and a forum on "The Basics of Amateur Digital Communications - A Crash Course for Beginners" was given by John Kaplan, WR0W. The session was well attended. A large group went to eat dinner at the Mall of America that evening, which was worth the trip to the conference in itself.

On Saturday, the conference began at 8am with welcoming remarks by Carl Estey, WA0CQG. At 8:30am the first of three strands began.

==========
8:30am -- Technical Papers Presentation
Automatic Packet Reporting System by Bob Bruninga, WB4APR; presented by Paul Evans, W4/G4BKI. The paper (7 pages) discusses APRS (Automatic Packet Reporting System) and details several applications for APRS.
MacAPRS: Mac Automatic Packet Reporting System by Keith Sproul, WU2Z. The paper (13 pages) discusses APRS and the Macintosh implementation of it. Contains more detailed information on the system and has pic. The paper (2 pages) discusses GPS (Global Positioning System) and how GPS is used in packet radio.

Forum - Developments in DSP for the amateur moderated by Bob Stricklin, N5BRG.

Forum - TCP/IP - What's next? moderated by Lew Shannon, K0RR.

(Continued in Bulletin TAPR922.002)

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SB TAPR @ ALLUS $TAPR922.002
NEWS: Part 2: 13th ARRL DCC

Please use BID: $TAPR922.002

(Continued from Bulletin TAPR922.001)
================
10:15am -- Technical Papers:
        G-TOR: The Protocol by Mike Husling, Phil Anderson, W0XI, Karl Medcalf, WK5M, and Glen Prescott, WB0SKX. The paper (31 pages) details G-TOR. Includes: overview, technical details, speed transition diagram, SDL Diagrams, Huffman Decoding Tree, and C program routines. GMON-a G-TOR Monitoring Program for PC computers. Richard Hu Anderson, W0XI. The paper (6 pages) describes a method for monitoring G-TOR communications. A Theoretical Evaluation of the G-TOR Protocol Hybrid ARQ Protocol by Glenn Prescott, WB0SKX and Phil Anderson, W0XI. The paper (6 pages) discusses the advantand Baudot were tested in a simulator and the results shown in the paper.

Forum - ARRL Committee Updates: "Future Modes": moderator, Tod Olson, K0TO

Forum - Digital Data (Voice and Image) Transmission Method Developments. Moderator Phil Karn, KA9Q.

================
12noon Technical Papers
        Broadcast, UI, and Un-connected Protocols - The Future of Amateur Radio by Paul Evans, W4/G4BKI. The paper (4 pages) overviews user applications and the relevance of connected protocols and suggests formats for unconnected systems. On Fractal Compress of Images for Narrowband Channels and Storage by Witt Kinsner, VE4WK. The paper (5 pages) comments on several new classes of compression techniques based on fractals. Fast CLEP Algorithm and Implementation for Speech Compression by Witt Kinsner, VE4WK. The paper (13 pages) describes a fast algorithm and implementation of code exor image transmission through band limited channels.

Forum - High-Speed (above 1200 baud) data transfer Methods and networking techniques. Moderator John Ackermann, AG9V

Forum - HF Data Transmission Methods - An overview of current modes and what's coming next. Moderator Frank Perkins, WB5IPM.

Meeting - DSP-93 TAPR/AMSAT project beta test group.

================
3pm Technical Papers
        How Amateur Radio Operators can Emulate an HF ALE Radio by David Wortendyke, N0WGC. The paper (3 pages) how Automatic Link Establishment (ALE) can be used and some of the future potential for emulating an ALE radio using only typical amateur equipment. FSK Modem with Scalable Baud Rate by Wolf-Henning Rech, N1EOW. The paper (7 pages) discusses the design of a scalable baud rate modem. Paper includes schematics. Formation of the TAPR BBS SIG by David Wnd future goals. Designing Rural Telecom Systems for Developing Countries, Joe Lischa, KA0NUZ.

Papers that were not presented, but are in the proceedings include: A Proposal for a Standard Digital Radio Interface by Jeffrey Austen, K9JA. Computer Networks in Africa: From Utopian Discourse to Working Reality by Iain Cook. ROSE X.25 Packet Switch Status Update by Thomas Moulton, W2VY. A Primer on Reliability as Applied to Amateur Radio Packet Networks by Tom McDermott, N5EG.

================
7pm
TAPR SIG Meetings (NETSIG/BBSSIG)

"A Low Cost DSP Modem for HF Digital Experimentation" by Johan Forrer, KC7WW.

================

The demo area saw a lot of activity with TAPR, Timewave, and Kantronics showing things. Several of the presenters were displaying their work.

Video tapes of the paper presentation are available. There are three tapes, which can also be gotten individually. For more information contact Paul Ramey, WG0G, 16266 Finland Ave, Rosemount, MN, 55068.

The TwinsLAN's folks did an outstanding job and have set a fine trend for future DCCs. Next year's Digital Communications Conference will be co-hosted by TAPR and TPRS (Texas Packet Radio Society) in Sept. 1995, in the Dallas/Ft Worth area.

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October 1994

Original source file: tapr-bb.9410
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1994-10/TAPR-BB_1994-10.txt

1. Help Update the Regional/Local Packet Listing

From: Greg Jones <gjones@tenet.edu>
Date: Sun, 2 Oct 1994 17:35:04 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199410022235.RAA00696@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

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October 2nd, 1994

Re: Help Update the Regional/Local Packet Listing

TAPR is working on trying to generate an accurate list of regional and local packet groups.

Many of the lists we have seen published in the last few years have been woefully out of date. TAPR feels that an accurate listing for regional/local packet groups is necessary to help exchange information and allow TAPR to tell people how to contact their regional/local groups.

Please review the information below and provide us with any changes necessary to reflect your group's current status. If you have information on one or more of the groups, please make corrections and submit back to us. In this way, we hope to update this list and add any new groups that might not be on the list.

We will distribute this information in various future TAPR publications and in TAPR's quarterly journal, the PSR (Packet Status Register) from time to time. So , getting your information correct will help you as well as TAPR. In addition, we will be adding each of the groups to the PSR mailing.

TAPR believes that the local and regional groups should be and are responsible for educating and providing the necessary glue for local operators to succeed. As a national organization, TAPR can provide the necessary glue and information dissemination to tie all our groups together.

TAPR has been busy this last year working on transforming TAPR from a strictly hardware/software development group into a more well-rounded membership society which continues to work on technology. This means that the membership is growing rapidly as more mid-level digital operators are joining TAPR and participating in the process. This could mean much to local/regional groups, if you decide to take advantage of this opportunity. TAPR has made available space in every issue of the TAPR PSR for regional and local groups to publish articles and information on their activity or projects. This can be as simple as submitting already published information from your organization's publication or writing something special for the PSR.

We do recognize that for TAPR's membership to continue to grow will depend on getting regional and local digital organizations active in TAPR activities and feeling that you are contributing to the national perspective. Information sharing is a first step. In the future, it is hoped that together, TAPR and the regional packet groups can provide the kind of leadership that digital communications enthusiasts are eagerly looking for.

You can provide changes to the list, by mail (address above), fax (817) 566-2544, phone (817) 383-0000 or Internet tapr@tapr.org

We look forward to your feedback.

Cheers,
Greg Jones, WD5IVD
President, Tucson Amateur Packet Radio

P.S. If you have any suggestions on how TAPR can work with your group or others, please feel free to give a call or send e-mail.

This file is CSV format (Comma Separated Values). Most Spredsheet programs
will except this format. Be sure to indicate that the text delimiter is a
comma and not a tab, since many program default to a tab. Each line is a
complete record. Make sure that when you save this to a file, you do not
drop the formatting, or you will need to rrecombine lines.

Group Name,Address 1,Address 2,City,Region,Postal Code,Country,Work,Fax,Internet,Newsletter
Mt Ascutney Amateur Packet Radio Association,c/o Carl Breuning N1CB,54 Myrtle St,Newport,NH,3773,,,,,
New England Packet Radio Association (NEPRA),PO Box 208,,East Kingston,NH,3827,,,,,NEPRA PacketEar
Connecticut Digital Radio Association (CONNECT),c/o Tom Hogerty KC1J,83 Harold
Rd,Farmington,CT,6032,,,,,
American Radio Relay League (ARRL),225 Main St,,Newington,CT,6111,,,,INFO@ARRL.ORG,Gateway
Radio Amateur Telecommunications Society (RATS),c/o J Gordon Beattie Jr N2DSY,206 North Vivyen
St,Bergenfield,NJ,7621,,,,,
Cherryville Repeater Association,Box 308,,Quakertown,NJ,8868,,,,,
Packeteers of Long Island (POLI),c/o Alex Mendelsohn AI2Q,92 Hathaway Av,Elmont,NY,11003,,,,,The POLI
Parrot
Mt Beacon Amateur Radio Club,PO Box 841,,Wappingers Falls,NY,12590,,,,,
Rochester Packet Group,c/o Fred Cupp W2DUC,27 Crescent Rd,Fairport,NY,14450,,,,,
Pennsylvania Packet Association (PaPA),c/o Bryan Simanic WA3UFN,9 Wild Cherry Dr,DuBois,PA,15801,,,,,
Radio Amateur Satellite Corp (AMSAT),PO Box 27,,Washington,DC,20044,,,,,AMSAT Journal
Mid-Atlantic Packet Radio Club,c/o Tom Clark W3IWI,6388 Guilford Rd,Clarksville,MD,21029,,,,,
Wake Digital Communications Group (WDCG),c/o Randy Ray WA5SZL,9401 Taurus Ct,Raleigh,NC,27612,,,,,
South Carolina Amateur Radio Digital Society (SCARDS),PO Box 1281,,Columbia,SC,29202,,,,,SCARDS
Newsletter
Southern Amateur Packet Society (SAPS),c/o Wayne Harrell WD4LYV,Rt 1 Box 368,Sycamore,GA,31790,,,,,
Florida Amateur Digital Communications Association (FADCA),812 Childers
Loop,,Brandon,FL,33511,,,,,FADCA>Beacon
Mississippi Amateur Radio Digital Association (MARDA),c/o Patrick J Fagan WA5DYV,2412 E Birch
Dr,Gulfport,MS,39503,,,,,
Ohio Packet Enthusiasts Club (OPAC),c/o Bob Ball WB8WGA,830 Riva Ridge Blvd,Gahanna,OH,43230,,,,,
Cincinnati Amateur Packet Radio Experimenters Society (CAPRES),c/o John Schroer IV KA8GRH,948 Halesworth
 Dr,Forest Park,OH,45240,,,,,
Eastern Packet Radio of Michigan (EPROM),c/o Jay Nugent WB8TKL,3081 Braeburn Cir,Ann Arbor,MI,48104,,,,,
Western Michigan Packet Radio Association (WMPRA),PO Box 4612,,Muskegon,MI ,49444,,,,,
Central Iowa Technical Society (CITS),c/o Ralph Wallio W0RPK,1250 Hwy G24,Indianapolis,IA,50125,,,,,
Wisconsin Amateur Packet Radio Association (WAPRA),PO Box 1215,,Fond Du Lac,WI,54935,,,,,Badger State
Smoke Signals
TwinsLAN Amateur Radio Club,c/o Kermit Kramer W0RFD,1121 Xerxes Av S,Minneapolis,MN,55405,,,,,The
TwinsLAN Beacon
Packet Radio Organization of Montana (PROM),c/o Glenda Allen KE7TB,165 Conifer Rd,Libby,MT,59923,,,,,
Chicago Amateur Packet Radio Association (CAPRA),PO Box 8251,,Rolling Meadows,IL,60008,,,,,The CAPRA
Beacon
St Louis Area Packet Radio (SLAPR),9926 Lewis & Clark,,St Louis,MO,63136,,,,,
Utah Packet Radio Association (UPRA),c/o Bart Van Allen KA7ZFD,11883 S Kinney
Cir,Riverton,UT,84065,,,,,RMPRA>Packet
Arizona Packet Radio Association,8402 E Angus Dr,,Scottsdale,AZ,85251,,,,,
Southern California Digital Communications Council (SCDCC),PO Box 4357,,Chatsworth,CA,91313,,,,,The
I-Frame
Los Angeles Area Packet Group (LAPG),PO Box 6026,,Mission Hills,CA,91345,,,,,
San Diego Packet Radio Association (SANDPAC),c/o Barry Gershenfeld,5085 Arroyo Lindo Av,San
Diego,CA,92117,,,,,San Diego Packet Radio Association Newsletter
San Diego Packet Group (SDPG),c/o Mike Brock WB6HHV,10230 Mayer Cir,San Diego,CA,92126,,,,,
Pacific Packet Radio Society (PPRS),PO Box 51562,,Palo Alto,CA,94303,,,,,
Northern California Packet Association (NCPA),6608B Alhambra Ave,Suite 111,Martinez,CA,94553,,,,,NCPA
Download
Oregon Digital Network Coordination Council (ODNCC),7860 SW 69th Av,,Portland,OR,97223,,,,,
Northwest Amateur Packet Radio Association (NAPRA),c/o John Gates N7BTI,750 Northstream
Ln,Edmonds,WA,98020,,,,,Zero Retries
Amateur Packet Alaska (APA),AX.25 Communications Trail,,Ester,AK,99725,,,,,
Amateur Radio Research and Development Corp (AMRAD),PO Box 6148,,McLean,VA,22106-6148,,,,,AMRAD
Newsletter
Georgia Radio Amateur Packet Enthusiast Society (GRAPES),PO Box
871,,Alpharetta,GA,30239-0871,,,,,Grapevine
Central Illinois Packet Radio User Society (CIPRUS),c/o Larry Keeran K9ORP,RR 1 Box
99B,Downs,IL,61736-9717,,,,,
Texas Packet Radio Society (TPRS),PO Box 50238,,Denton,TX,76206-0238,,,,,The TPRS Quarterly Report
Rocky Mountain Packet Radio Association (RMPRA),c/o Bill Flynn AI0C,286 S Nome
St,Aurora,CO,80012-1212,,,,,RMPRA>Packet
Tucson Amateur Packet Radio Corporation (TAPR),8987-309 E. Tanque Verde Rd
#337,,Tucson,AZ,85749-9399,,,,TAPR@TAPR.ORG,Packet Status Register
Sydney Amateur Digital Communications Group (SADCG),PO Box 231,,French's
Forest,NSW,2086,Australia,,,,The Australian Packeteer
Melbourne Packet Radio Group (MPRG),c/o David Furst VK3YDF,11 Church St,Hawthorn,Vic,3122,Australia,,,,
Vancouver Amateur Digital Communications Group (VADCG),9531 Odlin Rd,,Richmond,BC,V6X 1E1,Canada,,,,The
Packet

Hamilton and Area Packet Network (HAPN),Box 4466,Station D,Hamilton,ON,L8V 4S7,Canada,,,,
HEX 9 Group,PO Box 151,,Orilla,ON,L3V 6J3,Canada,,,,
Bavarian Amateur Packet Radio Group (BAPR),c/o Thomas Kieselbach DL2MDE,Narzissenweg 10,8031 Wessling,,,Federal Republic of Germany,,,,
NORD><LINK,c/o Hans Georg Giese DF2AU,Hinter dem Berge 5,D-3300 Braunschweig,,,Federal Republic of Germany,,,,
Amateur Radio and Computer Club (AMRAC),9 Hollydene Villas,Southampton Rd,Hythe,Southampton,S04 5HU,Great Britain,,,,
Haifa Amateur Group For Digital Communications,PO Box 7238,,Haifa 31071,,,Israel,,,,
Oimo Club,c/o PRUG,PO Box 66,Tamagawa,Setagaya,Tokyo 158,Japan,,,,
Packet Radio User's Group (PRUG),PO Box 66,,Tamagawa,Setagaya,Tokyo 158,Japan,,,,
Connect International ,Radio Society of Great Britain (RSGB),Lambda House,Cranborne Road,Potters Bar Herts,EN6 3JE,UK,,,,Radio Communication
Midlands AX.25 Packet Radio Users Group (Maxpak),c/o David Bentley G4RVK,10 Churnet Grove,Perton,Wolverhampton,,UK,,,,Digicom
British Amateur Radio Teleprinter Group (BARTG),Pat & John Beedie GW6MOJ & GW6MOK,Ffynnonlas Salem,Llandeilo,Dyfed,SA19 7NP,Wales,,,,Datacom

--- END

2. Back Issues of PSR

From: Greg Jones <gjones@tenet.edu>
Date: Wed, 5 Oct 1994 05:56:46 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199410051056.FAA19362@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

Back Issues of PSR are now available on TAPR.ORG.

To receive the current list, send a message to 'listserv@tapr.org'
in the message body, place 'index tapr'.

To get a file, send a message to 'listserv@tapr.org'
in the message body, place 'get tapr filename'

What follows is the contents from each.

           TAPR -- Packet Status Register -- Electronic Edition

TAPR News Service   PSR #51, Summer, 1993

Packet Status Register
Issue Number 51, Summer 1993
Published by Tucson Amateur Packet Radio Corporation

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President's Corner
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Update on the DSP project
TrakBox again available from TAPR
Automatic Doppler Correction Circuit
RealTrak software product announcement
ItamSat Project update
More notes about the G3RUH modem
Notice of TAPR Annual Meeting
Notice of 1993 ARRL Digital Conference
Notice of HamShow Convention in Valley Forge
Minimal TNC-2 parts needed for 9600 bps operation
Forward Error Correction
Notice of discontinuance of 5.25" diskettes

           TAPR -- Packet Status Register -- Electronic Edition

TAPR News Service   PSR #52, Fall, 1993

Packet Status Register
Issue Number 52, Fall 1993
Published by Tucson Amateur Packet Radio Corporation

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Board of Directors Nominations
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Hi-speed digital communications in Japan
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Back-Lighting for TrakBox LCD Display
Restrictions relaxed on permissible communications
A new hi-speed TNC
TAPR 1994 Annual Meeting
TAPR File Server
TAPR Deviation Meter Update Notes
New MicroSats - a Personal View
Connect Requests
Software Library Update


------------------------------------------------------------------------------
                      Tucson Amateur Packet Radio Corp
                 Packet Status Register -- Electronic Edition

TAPR News Service                                        PSR #53, Winter, 1994
------------------------------------------------------------------------------
Packet Status Register
Issue Number 53, Winter 1994
Published by Tucson Amateur Packet Radio Corporation

Inside -

President's Corner
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Annual Meeting Announcement
Board of Director Elections
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PCON - Packet Printer Controller
DSP-93 Project Update
PCON and TUC-52 Project Updates
MetCon Project Ideas
Dayton Convetion Preliminaries
TrakBox Panel Layouts
More on using the Alinco DR-1200T at 9600 baud.
Teacher uses Packet Radio
National Digital Communications Conference announcement
AMSAT-UK E-Mail address.
Review of Pico-J Portable Antenna
GRAPES address correction.
Error Correction Codes for Packet Radio
HROUTE Forwarding - an alternate approach
DOC   Using the G3RUH modem at higher speeds.
Packet software for the MAC: Savant.
Interim Report of the ad hoc 219 MHz Committee.
Secretary's Report -- A year in review.
Getting out of KISS mode.



------------------------------------------------------------------------------
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3. Update on DSP-93 Kit

```
From: Greg Jones <gjones@tenet.edu>
Date: Sun, 23 Oct 1994 17:52:53 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199410232252.RAA23557@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

NEWS: TAPR/AMSAT DSP-93 Update

Tucson Amateur Packet Radio                          October 23rd, 1994
------------------------------------------------------------------------------
               DSP-93    The TAPR/AMSAT Joint DSP Program
------------------------------------------------------------------------------
```

(see below intro and design for new stuff)

Introduction

In July 1988, TAPR and AMSAT entered into the Joint DSP Program, in order to fund the development of an eventual DSP unit for amateur usage. During the summer of 1993, the direction of development was focused on a modular, standalone DSP system proposed by Bob Stricklin, N5BRG, in Dallas, Texas. The Stricklin DSP-93 design offered many of the things that the initial design goals of the project had specified. TAPR and AMSAT are currently taking orders on a periodic basis for units (see below). The DSP-93 is supplied as a complete kit (including enclosure and power supply).

For those not wanting to build a kit, there are preassembled DSP units on the market today. Ads for these units can be found in various publications. It is our hope that the TAPR/AMSAT joint DSP-93 project will expand the use of DSP in the amateur community and become a tool for education.

DSP-93 Design

The DSP-93 is designed to provide radio amateurs the wonderful capabilities of Digital Signal Processing in a stand-alone low-cost design. Not just limited to one mode, the DSP-93 can support data, audio, and video modes with the proper software.

DSP-93 has been designed in a modular fashion with two four-layer boards utilizing an interconnecting bus structure. The basic system includes a DSP engine board and a radio/computer interface board. The DSP Engine, bottom board, contains the TMS320C25 DSP, 32K by 16 bits of program and data memory - upgradable to 64K, the clock circuitry (40Mhz) and some programmable array logic for system I/O. The Radio/Computer Interface Board, top board, contains two eight pin female mini-DIN connectors for radio interfacing. Incoming radio signals pass through a voltage divider to establish the initial levels, then through an eight channel multiplex chip. The multiplex chip then feeds the single A/D input with either of the radio inputs or one of the six auxiliary inputs. The Texas Instruments TLC32044 Analog I/O chip is used, which samples and updates at a rate of up to 45K operations per second and includes aliasing filters. This board also communicates to your computer at speeds up to 19.2K baud using a serial connection.

The modular design of the DSP-93 allows for either of these boards to be replaced with future boards designed for any number of unique applications. It's sort of like adding a new application card to a PC without redesigning the complete PC. The block diagram shows how the DSP-93 is interfaced. (see phamplet)

DSP-93 Software Suite

As of November 15th, 1994, the following software has been made available for the DSP-93:
1200 AFSK*, 300 AFSK*, 1200 PSK*, 9600 FSK terrestrial*, 9600 FSK full-duplex for satellite operations, audio filters*, APT (Automatic Picture Transmission modem), Digital Oscilloscope, HF modem* (RTTY, PCTOR, AMTOR), test routines*, and user interfaces for MS Windows and Macintosh.

(* - indicates source is available for amateur non-commercial use.)

Software will be distributed on Internet, Amateur Satellites, and as part of the TAPR software library. The idea of software for the DSP-93 is to make it as easy as possible to get and upgrade software in the future. Since the DSP-93 is an open architecture, it is hoped that as more amateurs get their units, more software will be developed and distributed.

Code Development

A low cost shareware assembler, TASM TMS320-25 Assembler, is available for code development. To develop code for this board, you must have good reference material. You can find numerous books on DSP algorithms and developing DSP code. The manufacturer's data sheets and books for the complex chips will also be good reference material. All the details needed to write DSP code will be supplied with the kit.

To make this project a bigger success, more people are needed who want to learn about developing DSP applications, networking, and converting from the real linear world to the digital world. Ideally, everyone taking the challenge will select a particular idea and become so focused in the

application that they become the expert. Some of the areas for development might include: new modulation techniques, speech synthesis, filters, spectrum analyzers, and many more applications you will think of. If you choose to work on the hardware aspects of this project, the modular approach should allow you to convert to other DSP chips or Analog I/O chips or to add additional capability.

Ordering your Kit

The DSP-93 sells for $430 as a complete kit, including enclosure and power supply. For those not wanting to build a kit, there are several preassembled DSP units on the market today. If you live in a country that does not use 110v 60Hz AC, the price is $420, and the unit will ship without the 9V AC wall transformer. (Please specify this in your order).

TAPR kits can be complex depending on the kitting experience of each builder. We don't think you will have trouble with the DSP-93 kit, but it does require some knowledge and experience to successfully go from a kit to a finished, usable unit, depending on the mode of operations. For data radio applications (i.e. 9600 baud FSK), special modifications must be made to your radio for proper operation of the DSP-93. Unlike other TAPR kits in the past, only the interface to the radio and the serial cable to the computer (DB-9) will be the responsibility of the kit builder. All other parts will be in the kit ready for complete assembly.

Due to the cost of each unit, TAPR and AMSAT are unable to fund the total purchasing of inventory that may sit idle. Neither organization can sustain such an investment. To avoid this possibility, TAPR and AMSAT are requiring that kit purchasers provide VISA/MC information or checks/money orders with their purchases.

Orders are being taken until December 31st, 1994 for March 1995 shipment. Money for the kit purchase will be deposited on January 15th, 1995 to cover kitting costs, with kits being shipped beginning March 15th. Orders will be taken for 150 units. As of October 23rd, 50 orders have been placed.

In this way, the DSP-93 kit will be provided in the exact numbers required for the demand. Many of the parts in the DSP-93 are between 10-15+ weeks. DSP-93 kits will be provided in batches as the demand warrants doing kits.

Orders can be mailed to the TAPR address: 8987-309 E. Tanque Verde Rd #337, Tucson, Az, 85749-9399, call (817) 383-0000 (Office Hours: Tue-Fri, 9am-12noon, 3pm-5pm Central Time), or fax (817) 566-2544. If you have questions concerning the unit, please write or call TAPR for an information pamphlet. The pamphlet will also be made available via fax through the TAPR voice system.

Note to TAPR members: Since this is a joint project, this kit will not have a membership discount attached.

References

Stricklin, Bob. (1994). TAPR/AMSAT Joint DSP Project: DSP-93. Proceedings of the TAPR 1994 Annual Meeting. Tucson Amateur Packet Radio Corp.

Stricklin, Bob and Greg Jones. (1993). TAPR/AMSAT DSP-93 Project. Proceedings of the 1993 AMSAT-NA. AMSAT.

Stricklin, Bob. (1993). DSP-93: The Joint DSP Program (TAPR/AMSAT). Issue #52, Fall 1993, Packet Status Register. pp. 4-5. Tucson Amateur Packet Radio Corp.

4. ET Docket No. 94-32 News Release

From: Greg Jones <gjones@tenet.edu>
Date: Wed, 26 Oct 1994 12:58:52 -0500 (CDT)
To: bbssig@tapr.org (BBS SIG mailing), tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199410261758.MAA27208@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

Report No. DC-2666 October 20, 1994

COMMISSION PROPOSES ALLOCATION OF SPECTRUM TRANSFERRED FROM
FEDERAL GOVERNMENT TO PRIVATE SECTOR

(ET DOCKET NO. 94-32)

The Commission today adopted a Notice of Proposed Rule Making that proposes to convert a large block of spectrum from Federal Government to commercial use. This spectrum would be made available for a variety of new services, creating new business opportunities and employment.

The Commission has proposed a general allocation to the Fixed and Mobile services for 50 megahertz of spectrum identified by the Department of Commerce for transfer from Federal Government use to private sector use. The Commission said the proposed allocations will benefit the public by providing for the introduction of new services or the enhancement of existing services.

In compliance with the provisioins of Title VI of the Omnibus Budget Reconciliatioin Act of 1993, the Department of Commerce released a report on Febuary 10, 1994, which made preliminary identification of 200 megahertz of spectrum for reallocation from Federal Government to private sector use, including 50 megahertz at 2390-2400 MHz, 2402-2417 MHz, and 4660-4685 MHz that is immediately available. The Reconciliation Act requires the Commission to adopt rules by February 10, 1995, to allocate the spectrum.

The Commission stated that its prinipal objective when making spectrum allocation decisions is to ensure that the spectrum is put to its best use. The Commission proposed to achieve this goal by proposing a broad and general allocation to the Fixed and Mobile services for all three frequency bands. Such an approach, the Commission said, would allow for flexible use of these bands so that licenses would be able to offer a wide range of services employing a variety of technologies. The Commission requested comment on this approach.

The Commission also believes that most of the services to be provided in this spectrum would likely meet the statutory criteria for auctions. Therefore, the Commission proposed to make licenses for this spectrum available through competitive bidding to the extent possible and practicable.

The Commission seeks to create a competitive market structure that would promote reasonable prices for users and provide operators with incentives to develop and introduce innovative service features and technologies. The Commission requests comment on an appropriate licensing structure, including channel block size and geographic licensing areas.

The Commission also proposed to allow technical flexibility in the provision of services. Specifically, the Commission proposed to allow users to choose the channelization, signal strength, modulation techniques and antenna characteristics in providing service, consistent with not causing interference to other users. Interference to operations in adjacent service areas would be controlled through power limits at the service area boundaries. Licensees would also be free to negotiate and develop agreements for interference conditions at the boundaries between their service areas. Comments are requested on these proposals.

As an alternative to allocating this spectrum generally for Fixed and Mobile services, the Commission requested comment on the possible allocation of these bands for specific communications services. A number of suggestions were put forth by various commenters responding to the Notice of Inquiry (NOI) in this proceeding. There include an aeronautical audio/video service to provide real-time information and entertainment aboard aircraft, wireless local loop service, broadcast auxiliary services to support advanced television, low-power communications, and continued use of some of this spectrum by the amateur community.

Action by the Commission October 20, 1994, by Notice of Proposed Rulemaking (FCC 94-272). Chairman Hundt, Commissioners Quello, Barrett, Ness and Chong.

News Media contact: Susan Sallet and Patricia A. Chew at (202) 418-0500.
Office of Engineering and Technology contact: Steve Sharkey at (202) 653-8151.

Dewayne Hendricks, WA8DZP ! CIS: 75210,10 AppleLink: D6547
Tetherless Access Ltd. ! Packet Radio: WA8DZP @ K3MC.#NOCAL.CA.USA.NOAM
43730 Vista Del Mar ! AOL: HENDRICKS
Fremont, CA 94539-3204 ! Internet: dewayne@tetherless.com
Phone: (510) 659-0809 ! Fax: (510) 770-9854

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5. [TAPR-BB:14] Just FYI: FCC Rules changes for the VE program (fwd)

From: Greg Jones <gjones@tenet.edu>
Date: Wed, 26 Oct 1994 13:01:42 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199410261801.NAA27590@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

Sender: "Battles, Brian, WS1O" <bbattles@arrl.org>
Subject: Just FYI: FCC Rules changes for the VE program

From: Jahnke, Bart, KB9NM
To: 'arrl-ve-list'
Subject: FCC Rules changes for the VE Program - E
Date: Tuesday, October 25, 1994 17:47

The following was released yesterday (Oct 24) as an ARRL Bulletin:

         FCC LICENSING CHANGES

The FCC today released a 7-page Order amending its amateur rules, effective December 20, 1994, to reflect what the Commission calls "nonsubstantive procedural changes":

1) To permit electronically filed data from VECs (paper applications will still be accepted);

2) To authorize operation as soon as the new license data appears in the amateur service licensee data base, rather than (as now) when the license document has been delivered (details of how the new licensee can determine his call sign will be announced later);

3) To add a new rules section, "Examinee Conduct," to emphasize that an examinee must comply with the instructions given by the administering VEs;

4) To treat "Technician Plus" as a license class;

5) And to provide for a "renewal short form," which the FCC says will be mailed to licensees in advance of their expiration date beginning sometime in 1995.

Because of the nature of these rule amendments, there's no notice or comment period required by federal law. These changes do not take effect until December 20, 1994.

 In addition, a new FCC Form, specifically FCC Form 610-R--a license-renewal short form, will be used by the Commission's in sending license expiration notifications directly to licensees. Regarding renewals, the text of notice also stipulates, "The application must be submitted no more than 90 days before its expiration to: FCC...". Therefore, beginning December 20, 1994, no renewal application will be considered until the license has the last 3 months remaining of it's 10-year term.

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6. [FCCREG:72] FCC ET Docket 94-124 - FYI

From: Greg Jones <gjones@tenet.edu>
Date: Wed, 26 Oct 1994 17:34:57 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199410262234.RAA29333@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

According to Dewayne Hendricks:

Report No. DC-2667   ACTION IN DOCKET CASE   October 20, 1994

        NEW RULES PROPOSED TO INCREASE THE AMOUNT OF SPECTRUM AVAILABLE
                          FOR COMMERCIAL USE
                          (ET DOCKET 94-124)

        The Commission has proposed making available 18 GHz of spectrum in the "millimeter wave" frequency bands above 40 GHz for the introduction and development of new commercial technologies. This allocation would substantially increase the amount of spectrum space available for

commercial uses and could shift the emphasis in this band from military to civilian applications. The same type of ttechnology that is being developed to guide "smart bombs" could soon be used to warn drivers that their car is too close to the one in front of them.

The term millimeter wave frequency bands refers to the fact that the wavelength of radio signals on frequencies between 30 GHz and 300 GHz ranges from one and 10 millimeter waves.

Until now, millimeter wave technology has been limited to military and scientific applications. The new proposals for commercial use of this spectrum will encourage its use to deliver commercial products and services.

Making these new frequencies available will permit the development of short-range wireless radio systems that could have communications capacities approaching those now achievable only with coaxial and optical fiber cable. Such systems could support many short-range applications that require very high bandwidth or data transfer rates. Uses could include educational or medical applications such as remote wireless access to libraries or other informational databases; and non-communication uses such as automobile radar systems to avoid collisions.

The proposed rules provide for the operation of new services on both licensed and unlicensed bases. The short range of signals in this frequency range minimizes the potential for interference, allowing the Commission to permit unlicensed operation for many uses.

The radio spectrum above 40 GHz is generally unused because the technology to operate in this portion of the spectrum has been prohibitively expensive. In recent years, however, the U.S. Government has funded projects in millimeter wave technology for a number of military and scientific applications. The Defense Department's Advanced Research Projects Agancy has funded a nearly $600,000,000 program to decrease component costs for this technology. Given these advances, the Commission said, it now appears that millimeter wave technology can be used for commercial applications.

The Commission is proposing to open a substantial portion of millimeter wave spectrum for use by new communications services and technologies. Almost all of the spectrum above 40 GHz is shared between government and non-government use. In cooperation with the Department of Commerce's National Telecommunications Information Administration (NTIA), the Commission identified 12 frequency bands between 47 GHz and 153 GHz for potential use by new millimeter wave technologies. The Commission tentatively proposed to to make available 6.3 GHz of spectrum for licensed operation, 8.5 GHz of spectrum for general unlicensed devices, and 3.2 GHz of spectrum for vehicular radar systems.

The bands are: 40.5-42.5 GHz; 47.2-48.2 GHz; 59.0-64.0 GHz; 71.0-72.0 GHz; 76.0-77.0 GHz; 84.0-85.0 GHz; 94.7-95.7 GHz; 103.0-104.0 GHz; 116.0-117.0 GHz; 122.0-123.0 GHz; 126.0-127.0 GHz; 139.0-140.0 GHz; and 152.0-153.0 Ghz.

Action by the Commission October 20, 1994, by Notice of Proposed Rulemaking (FCC 94-273). Chairman Hundt, Commissioners Quello, Barrett, Ness and Chong.

News Media contacts: Audrey Spivack and Rosemary Kimball at (202) 418-0500
Office of Engineering and Technology contacts: Dr. Michael Marcus at (202) 653-8110, email: mmarcus@fcc.gov or David Wilson at (202) 653-8138, email: dwilson@fcc.gov.

Dewayne Hendricks, WA8DZP ! CIS: 75210,10 AppleLink: D6547
Tetherless Access Ltd. ! Packet Radio: WA8DZP @ K3MC.#NOCAL.CA.USA.NOAM
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Fremont, CA 94539-3204 ! Internet: dewayne@tetherless.com
Phone: (510) 659-0809 ! Fax: (510) 770-9854

November 1994

Original source file: tapr-bb.9411
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1994-11/TAPR-BB_1994-11.txt

1. DSP-93 Kitting Help

From: Greg Jones <gjones@tenet.edu>
Date: Wed, 2 Nov 1994 11:57:09 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199411021757.LAA01490@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

Hello TAPR-BB List.

We were finishing up our parts purchases for the upcoming DSP-93 build and
our supplier for the 9v AC wall transformer has dried up.

So - if you know of a supplier with 9v AC Wall Transformers (much like you
find with video games) rated at 1.5 amps with a 5mm plug (ID 2.6mm) please
contact me (wd5ivd@tapr.org).

We are still looking, but I wanted to see if anyone might be able to help short
cut the current effort.

Cheers - Greg

President -- Tucson Amateur Packet Radio Corp

TAPR Office (817) 383-0000 | Internet: gjones@tenet.edu
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2. DSP-93 Wall Transformer

From: Greg Jones <gjones@tenet.edu>
Date: Sun, 6 Nov 1994 11:59:16 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199411061759.LAA26972@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

Thanks to those sending information on sources.

Out of that, we found a supplier at a good price.

Thanks - Greg

3. PSR Arrival

From: Greg Jones <gjones@tenet.edu>
Date: Thu, 17 Nov 1994 00:57:40 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199411170657.AAA23612@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

TAPR Update: 11/17/94

** PSR

The TAPR PSR was mailed on the Nov 3rd.
You should have gotten or be getting yours soon.

We hope everyone enjoys this issue.

As a reminder, deadline for the Winter Issue (Jan) is December 15th, 1994.

If you have an article, news on local activity, or something you think
should go into the next issue of the PSR, you can send e-mail to
psr@tapr.org.

** Office Closure

As a reminder, the TAPR office will be closed from Dec 15th until Jan 9th.

Orders taken during this period will not be processed until Jan 9th.

** 95 Annual Meeting

Don't forget that the 1995 TAPR Annual meeting will be in St Louis in March.
The PSR has a full blurb on the event. You can register early and save
money. If you need further information contact the TAPR office.

** DSP-93 Kit

Orders are still being taken for the March kitting. We have 60 of the 150
slots filled as of this time. The deadline is December 31st, 1994.

The first production shipping is now scheduled for December 5th, due to the
designer, Bob Stricklin, being sent overseas on business, with the final
release monitor still needing work. Letters were mailed last week to all
the folks in the first production run. If you need further information on
this, send e-mail to tapr@tapr.org. As soon as Bob returns, fixes the
monitor code, it gets tested, and all the EPROMS are burned they will ship.

If you have not done so yet, you might join the dsp-93 mail group now
available on listserv@tapr.org. The mailgroup is not yet activity, but
get on early and be sure to get all the messages.

** Membership

TAPR has reached it goal of having more than 2000 members this year.
Thanks to all those that helped. Now the next gaol is to reach 5000
members! If you need handouts for local club meetings or hamfests, contact
tapr and we can get you things to handout and distribute.

** Bulletin Editor Needed

TAPR is looking for someone who in interested handling the creation of TAPR
bulletins and information updates for this list and packet. If you think
you would like to volunteer with this task, please send mail to tapr@tapr.org

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TAPR WWW Home Page

More news shortly. :-)

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
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4. Packet Radio is on the World-Wide-Web!

From: Greg Jones <gjones@tenet.edu>
Date: Thu, 17 Nov 1994 16:40:16 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199411172240.QAA02400@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

Packet Radio is on the World-Wide-Web!

InfoMotion is proud to sponsor a series of web pages dedicated to Packet
Radio. The series is accesible through the Packet Radio Home Page at this
URL:

        http://bb.iu.net/infomotion/pkthome.html

What's here? A page of links (the Home Page), the TAPR Home Page, a page of
Packet Pioneers and Contacts, a hypertext packet primer and FAQ, and more.

Thanks to Greg Jones, WD5IVD, TAPR President, for his support and invaluable contributions of the TAPR page, primer, and FAQ contents, and to all of the contactees appearing on the contact's page for allowing use of their e-mail and web page addresses.

We seek: more packet-specific links to add and any comments and suggestions on how to make the series more useful. All ideas welcome, please send to me at the address below.

Howie N2WX   imotion@iu.net

5. 23 November 94 Software Listing

From: Greg Jones <gjones@tenet.edu>
Date: Tue, 29 Nov 1994 13:50:04 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199411291950.NAA17901@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

Updated: 23 November 1994

Tucson Amateur Packet Radio Corp.
8987-309 E Tanque Verde Rd #337
Tucson, AZ.. 85749-9399
Phone: (817) 383-0000
Fax: (817) 566-2544
Internet: tapr@tapr.org

TAPR is a Non-Profit R & D Corporation

TAPR SOFTWARE LIBRARY

In addition to supplying various kits and firmware, TAPR maintains a library of packet radio-related computer software. Disks are currently available in 3-1/2 in. 720K format for $3.00 each, including mailing (slightly more for foreign orders). In the future, possibly formats for other computers will be added. The current library listing contains the following entries (of which some are two-disk packages). Additions to the software library are always welcome, however we do request that they be submitted either by, or with the expressed permission of, the author. TAPR attempts to provide the latest versions of all software; updates are appreciated. TAPR reserves the right to screen any submissions and restrict the library content as necessary. Both freeware and shareware are acceptable.

Current versions in TAPR software library - As of 23 November 1994
Items with ** following have been updated since last listing.

Key:

(*) Indicates two 3-1/2" disks.

Disk	Pgm Name	Version	Date
1.	APLINK	VER. 7.01	02-28-93
2.	AA4RE BBS	VER. 2.12	03-31-92
3.	CBBS	VER. 7.20	01-05-93
4.	EZPAC	VER. 1.1	01-09-89
5.	MONAX		10-30-87
6.	Ham Comm	VER. 3.08	03-08-91
7.	TNC2 Manual & EPROM's	VER. 1.18A	09-29-92
8.	Text Conversion Utilities		
	R95	VER. 4.0	01-25-92
	7PLUS	VER. 2.02	06-27-92
	UUENCODE/UUDECODE	VER. 5.21	01-26-93
9.	ROSERVER PRMBS	VER. 1.73	05-08-92
10.	ROSE X.25 SWITCH	VER. 3.3	04-17-93 **
11.	KA9Q NET	VER. K34	01-14-94
12.	WXN Weather Svr.	VER. 5.11	06-07-94
13.	TNC1 CODE - TNC-2 Notes		05-30-84
14.	DELETED		
15.	WA7MBL BBS	VER. 5.14	02-11-90
16.	W0RLI BBS	VER. 18.01	10-15-94 **
17.	YAPP	VER. 2.0	12-18-86
18.	INTRO TO TCP/IP		09-09-87
19.	LAN-LINK	VER. 2.20	07-04-93 **
20.	ARESDATA	VER. 1.6	12-31-92

21/A	MSYS	VER. 1.16/1.17	03-24-94 (*) **
22.	G8BPQ NODE	VER. 4.08	11-05-94 **
23.	UTILITIES		
	PKARC	VER. 3.6	
	PKZIP/PKUNZIP	VER. 2.04G	
	LHA	VER. 2.11	
	ZOO	VER. 2.10	
	UUENCODE/UUDECODE	VER. 5.21	
24.	THS	VER. 2.50	11-11-89
25.	VE4UB NTS	VER. 091891	09-18-91
26.	NM1D DOSGATE	VER. 1.14	11-29-89
27.	SV7AIZ BBS	VER. 3.24	04-05-90
28.	TEXNET	VER. 1.6	02-05-91
29.	Intro Packet Radio, A Tutorial		05-07-93
30.	Microsat Ground-Station Software		
	PB		04-30-92
	PG		02-25-92
	PFHADD		03-24-92
	PHS		12-21-90
31.	DELETED		
32.	PAMS	VER. 2.09	08-14-93 **
33.	TNC2 Mon. Z80		09-02-91
34.	GIL	VER. 1.03	03-30-91
35/A	PAKET	VER. 6.1	08-15-94 (*) **
36/A	F6FBB BBS	VER. 5.15	03-06-93 (*)
37.	TPK	VER. 1.82	10-24-94 **
38.	JNOS (Executables, Doc's)	VER. 1.10G	08-26-94 **
39/A	JNOS (Source for 38)	VER. 1.10G	08-26-94 (*) **
40.	SP Packet	VER. 6.10E	02-06-92
41.	TAPR DevMeter source & tools		10-01-93
42.	PCTOR/PC-PACTOR	VER. 3.02A	08-10-93
43.	METCON source & tools	VER. 1.07	01-17-93

Orders for any of the above disks, new submissions or updates to the TAPR software library should be sent to the TAPR office.

The following is a brief description of the current listings in the TAPR software library:

1. APLINK - A concurrent AMTOR MBO and packet BBS system by Victor D. Poor, W5SMM.

2. BB - A multiconnect packet mailbox program by Roy Engehausen, AA4RE. Requires the use of AEA or WA8DED host mode or G8BPQ switch software for operation.

3. C-BBS - Packet BBS program written in C language. Originally written by Hank Oredson, W0RLI, current version by K3RLI and AG3F.

4. EZPAC11 - A menu-driven NTS message formatter by Mike Imel. Disk also contains a copy of WA7MBL's YAPP terminal program.

5. MONAX - A program for monitoring a packet radio channel and gathering system statistics. Described in a paper (included on the disk) presented in the 6th ARRL Computer Networking Conference by Harold Price, NK6K and Skip Hansen, WB6YMH.

6. Ham Comm - A DSP RTTY program with VGA spectrum display, oscilloscope, tuning indicator, all real time. Uses simple 1 chip interface, schematic included, all parts available at Radio Shack. Powered by serial port.

7. Manual and EPROM's for TAPR TNC2
Assembly & operating manuals for TAPR TNC-2 plus EPROM images for 1.1.8a firmware, KISS & state machine

8. Binary-to-ASCII conversion utilities - R95, 7PLUS, UUENCODE/UUDECODE - Utility programs to permit sending binary files by packet radio.

9. ROSERVER/PRMBS - A packet radio BBS with telephone modem support by Brian Riley, KA2BQE.

10. ROSE - The ROSE switch by Tom Moulton, W2VY.

11. KA9Q NET - Executables and source code for the NET version of TCP/IP by Phil Karn, KA9Q, with enhancements by Joe Buswell, K5JB.

12. WXN Weather Server - A multi-user weather server that runs as an application on the G8BPQ switch. Uses the Heath ID-5001 Advanced Weather Computer for weather data. Includes PC user program that runs on a TNC2.

13. TNC-1 source code - Source for the TAPR TNC-1 firmware, TNC-2 Notes.

14. DELETED

15. WA7MBL BBS - Packet BBS system by Jeff Jacobsen, WA7MBL.

16. W0RLI BBS - Packet BBS system by Hank Oredson, W0RLI.

17. YAPP - A packet terminal program by Jeff Jacobsen, WA7MBL. Supports split-screen operation, ASCII and binary file transfer.

18. INTRO TO TCP/IP - Much descriptive and reference information on TCP/IP.

19. LAN-LINK - Packet terminal program by Joe Kasser, G3ZCZ. Also supports the non-packet modes of PK-232, KAM and MFJ-1278.

20. ARES/Data - A packet radio data base system for emergencies by Weo Moerner, WN6I and Dave Palmer, N6KL.

21/21A MSYS - A multiconnect BBS with telephone modem, terminal, node and TCP/IP support by Mike Pechura, WA8BXN. Requires KISS mode.

22. G8BPQ NODE - A NET/ROM-compatible multiconnect software packet switch by John Wiseman, G8BPQ, which can be run standalone or in conjunction with a BBS package, ARES/Data or DX Cluster software.

23. Compression/archiving utilities - Utilities for archiving and un-archiving .ARC, .ZIP, .ZOO and .LHZ files.

24. THS - A terminal program for TNCs with WA8DED firmware or the DRSI PC*PA by Peter Heinrich, HB9CVV.

25. NTS traffic generator - A software package for generating NTS traffic by Bill Bowman, VE4UB.

26. NM1D DOSgate - A program allowing remote operation of a PC via packet radio by Rich Bono, NM1D.

27. SV7AIZ BBS - a multiuser, multiport BBS by Spiros Kavalaris, SV7AIZ for WA8DED/AEA host, DRSI or KISS TNC running G8BPQ switch.

28. TEXNET Applications - Software for use with the TEXNET switch by Texas Packet Radio Society.

29. INTRO TO PACKET RADIO - A tutorial on Packet Radio by Larry Kenney, WB9LOZ.

30. MICROSAT Ground Station Software - Programs and information for use with the MicroSats (AO-15, DO-17, WO-18 and LO-19) as well as UO-14 by Harold Price, NK6K and Jeff Ward, G0/K8KA.

31. DELETED

32. PAMS - A Personal AMTOR Mailbox System by Victor D. Poor, W5SMM.

33. TNC-2 Monitor - A Z-80 monitor for the TNC-2 and clones by Paul Newland, AD7I.

34. GIL - Graphics Interchange Language - Permits a convenient way to transmit more than just ASCII text messages, such as animated graphics drawings or diagrams over digital radio links.

35/35A PAKET - A TNC-2 program with features such as windowed operation for multi-connects by Tony Lonsdale, VK2DHU.

36/36A F6FBB BBS - Supports 15 languages, YAPP support, multiconnects, compressed message forwards.

37. TPK - French language terminal program with many features by Gerard Regnard, F1EBN.

38. KA9Q NOS - Executables and documentation for KA9Q's NOS version of TCP/IP software, with enhancements by Gerard van der Griten, PA0GRI, Johan

Reinalda, WG7J, and James Dugal, N5KNX.

39/39A KA9Q NOS - Source code for Executables on Disks 38/38A.

40. SP (Eskay Packet) - Hostmode program by DL1MEN for WA8DED firmware
with additional support for Baycom modems & KISS TNC's.

41. TAPR Deviation Meter - Source code & tools.

42. PACTOR - PCTOR runs AMTOR (CCIR476-6) on a PC compatible. All AMTOR
modes & listen are supported. Requires external HF Modem such as CP-1,
ST-6, DJ6HP or similar. Also includes PC-PACTOR for read only of PACTOR
traffic on a PC compatible.

43. METCON - Source code and tools.

6. Can you help ?

From: Greg Jones <gjones@tenet.edu>
Date: Wed, 30 Nov 1994 15:01:04 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199411302101.PAA13175@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

Trying to find someone with the following parts in stock.

If you know where these parts can be purchased (in stock), we know lots of
places we can order them, but need them ASAP. Please e-mail back or call me
at (512) 794-0578.

Thanks - Greg

Looking for:

Circuit Assembly

CA-S4VSC-31B   1x4 modular PCB interconnect
CA-D20VSC-63B 2x10   "   "   "
CA-D50VSC-63B 2x25   "   "   "

December 1994

Original source file: tapr-bb.9412
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1994-12/TAPR-BB_1994-12.txt

1. TAPR Update 12/10/94

From: Greg Jones <gjones@tenet.edu>
Date: Sat, 10 Dec 1994 05:16:33 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199412101116.FAA26177@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

TAPR Update 12/10/94

PSR Deadline for issue #57, Winter, is December 15th, 1994. If you have something for publication, please contact Bob Hanson, PSR editor at psr@tapr.org

Looking for regional packet news and information.

Upcoming deadline for the Spring issue is March 15th, 1994.

The TAPR office is scheduled to close on December 15th, 1994 and reopen January 9th, 1995. The fax, mail, and voice system will continue to operate, although no shipping/mailing will take place until the office reopens in January.

December 15th, 1994 is the deadline for nominations to the TAPR board. If you think you might be interested in finding out more about what it takes to be on the TAPR BoD, drop mail to wd5ivd@tapr.org There are three BoD position open.

TAPR Annual Meeting is still scheduled for March 3rd-5th in St Louis. Preregistration for annual meeting and Friday and Saturday Symposiums are until Feb 17th, 1995. Contact the office for full details.

Annual meeting proceedings deadline is set for Feb 7th, 1994. Contact kf7tp@tapr.org for author information.

DSP-93 Order Deadline.
Deadline for the March batch of DSP-93 units is December 31st, 1994.

Beta-Test applications are being taken for testing of the TAPR TUC-52 project. See past issues of the PSR or the 94 TAPR annual proceedings for more information. Contact the office to get an application mailed, faxed, or e-mailed. A small group of testers will be selected from those submitted. Not all applications can be accepted. A reliable and low-cost Internet e-mail connection is a must. Testers are required to sign a VolunteerUs Agreement and must cover the cost of the kits.

Still looking for scribes for the three SIGs. Scribes are responsible for writing an overview each quarter for the PSR. Contact tapr@tapr.org if you are interested and your e-mail will get forwarded to the correct SIG chair.

Proposed Recommendation for Hierarchical Addressing Protocol deadline is January 31st. If you have comments on the proposed recommendation send e-mail to dwolf@tcet.unt.edu. The recommendation was published in issue #56 or contact Dave for a copy.

As a reminder, TAPR has a page on WWW.
        http://bb.iu.net/infomotion/taprhome.html

RUDAK-U donations as of December total near $3000. TAPR still needs to
raise another $3000 to reach the $6000 needed from TAPR. As of the AMSAT-NA
meeting, RUDAK-U is now the only digital experiment being scheduled for
launch on Phase 3D. RUDAK-U is going to offer some tremendous advantages
for high-speed and long-distance communications since it will be overhead
for extended periods. Currently one regional packet group has donated $250
and we are hoping to find other regional groups that will see the potential
benefits of the proposed high-speed server and the possibilities of
long-haul networking via the Phase 3D satellite. Contact the office if you
can help this project.

The ARRL 14th annual digital communications conference has been scheduled
for Dallas/Ft Worth the weekend after labor day in September, 1995.

As of the last PSR, TAPR has only received two inquires concerning the
German 1.2 Ghz radio. If you are interested be sure to contact the office.
See issue #56, page 26. Current interest indicates no further effort should
be done.

Until next update.

Tucson Amateur Packet Radio
8987-309 E. Tanque Verde Road #337
Tucson, AZ 85749-9399
817-383-0000 (Tuesday - Friday 9:00-11:00am, 3:00-5:00pm CT)
             (15:00-17:00, 21:00-23:00 UTC)
817-566-2544 FAX

Internet: TAPR@TAPR.ORG
----

2. TAPR/AMSAT DSP-93 Status

From: Greg Jones <gjones@tenet.edu>
Date: Mon, 19 Dec 1994 02:28:43 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing), dsp@tapr.org, dsp-93@tapr.org
Message-ID: <199412190828.CAA22849@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

Happy Holidays from TAPR

TAPR/AMSAT DSP-93 shipping

The units will begin shipping today (12/19/94). It is estimated that it
will take most of the week to get all orders fully packaged and shipped.

The group DSP-93@TAPR.ORG is for kit building and hardware related
questions.

The group DSP@TAPR.ORG should be used for software and programming issues.

To subscribe to these groups:
1. Send e-mail to 'listserv@tapr.org'
2. Subject 'Request'
3. Message body:
      subscribe dsp-93 First_Name Last_Name
      subscribe dsp First_Name Last_Name

If you have any questions, please e-mail me or tapr@tapr.org

The DSP-93 ftp area will be opened after January 1 to handle updates and
revisions. Location to be announced.

Cheers - Greg

3. APRS SIG Formed

From: Greg Jones <gjones@tenet.edu>
Date: Mon, 19 Dec 1994 17:41:56 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199412192341.RAA12708@Gayle-Gaston.tenet.edu>
Rendered body type: text/plain

TAPR would like to welcome Keith Sproul, WU2Z, and the APRSSIG he will chair as the latest SIG to be formed in TAPR.

```
_____________________________________
 ________/   ____/   _/_____/ _/_____/
    _/     _/      _/ _/     _/ _/     _/
   _/    _/____/_/ _/_____/ _/_____/
  _/    _/      _/ _/         _/   _/
 _/    _/      _/ _/         _/     _/
_____________________________________
```

Information on the TAPR APRS Special Interest Group (APRS SIG)

  What is APRS?   (Automatic Packet Reporting System)

  What is GPS   (Global Positioning System)

  Where am I?

  Where are you?

  Where is the Hurricane?

  What is the weather like?

  Where are the emergency vehicles?

APRS is a system used for tracking people, weather, objects, weather balloons, and many other aspects of Amateur Radio.

This goal of this Special Interest Group is to create a forum for people interested in this type of activity so that they can ask questions and compare notes and exchanged ideas.

We will discuss things pertaining to APRS itself, GPS, GPS units applications of this type of technology, automatic weather reporting, uses of APRS in public events such as bike-a-thones, and uses of APRS in emergencies.

Your chairperson of the APRSSIG is Keith Sproul

```
Keith Sproul                      |Amateur Radio:    WU2Z
698 Magnolia Road                 |akasbb1@peabody.sct.ucarb.com
North Brunswick, NJ 08902-2647    |Packet Radio: wu2z@kb4cyc.nj.usa
Work: 908 563-5389                |AppleLink:    Sproul.K
Fax:  908 563-5035                |Chairman ACG-NJ Mac Users Group
Home: 908 821-4828                |Author of MacAPRS

---------------------------------------------------------------------------
Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
***************************************************************************
```

To subscribe to this mailing list send a message to `listserv@tapr.org` with the following line in the body of the message:

subscribe list full_name

Example:
subscribe aprssig FirstName LastName

4. TAPR Paper Preparation Guidelines

From: Greg Jones <gjones@tenet.edu>
Date: Tue, 20 Dec 1994 19:36:45 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199412210136.TAA17511@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

Deadline for receipt of camera-ready copy, in printed or electronic form is
February 7th, 1995 for the 1995 Annual Meeting Proceedings.

TAPR Paper Preparation Guidelines for TAPR Annual Meeting
Keith Justice, KF7TP, Proceedings Editor

These are the guidelines for the written versions of papers to be presented
at the 1995 TAPR meeting. Written versions submitted before the deadline
will be published in a Proceedings to be distributed at the meeting. In
following these guidelines, keep in mind that the Proceedings will be
printed directly from the camera- ready copy you submit. The instructions
which follow were taken with minor modifications from the ARRL guidelines
for camera-ready copy.

MEDIA
Electronic submission is encouraged, but the paper should still be "camera
ready" in MS Word or compatible form, following the guidelines provided
below. Electronic copy can be sent to the Editor in floppy form by land
mail, by e-mail, or by ftp, at one of the addresses given at the end of this
document. If desired, graphic material can be sent by hard copy separate
from the electronic copy.

FORMAT
Type your paper single-spaced like the text on this page. Leave at least a
1-inch margin on all sides. Leave a blank line before and after paragraphs
and paragraph titles. Use 10- to 12-pitch correspondence-quality type. If
you must use a dot matrix printer, use a fresh black ribbon. Justified or
unjustified text will be accepted. Use white correction fluid to correct
mistakes. You may insert special symbols by hand using black ink, or use
black press-on lettering.

PAGE NUMBERS
Do not type page numbers. These will be added later.

TITLE BLOCK
Center the title on the page, using solid bold faced capitals, as above.
You may use more than one line, if you wish, but single space between lines
in the title. Provide the names, and affiliations if any, of the author(s)
below the title in normal type face.

MAJOR TITLES
Type major heading in upper case bold, if possible, or underline them.
Indent the beginning of the text paragraphs 5 spaces.

Subheadings
Indent subheadings 5 spaces. Type in upper and lower case and underline
them. Indent first line of text 10 spaces.

ABBREVIATIONS
Use standard abbreviations per the ARRL Abbreviations List. If you use
non-standard abbreviations, please define them.

ILLUSTRATIONS
Drawings or photographs may be inserted in the text or all at the end of the
paper. Number all of your figures, and refer to them in the text by number.
Remember to leave a 1-inch margin to the edge of the page. Only line
drawings can be accepted; no photographs please. Photographs may not be
reproduced correctly if used. Be sure that all drawings are crisp and of
high contrast. Type the caption below the figure.

REFERENCES
If needed, include references at the end. Each reference should include
authorship, article title, and publication title. A reader should be able
to retrieve the information independently, based on the citation you
provide.

SUBMITTING PAPERS
What you submit will be what is printed. There will be no opportunity to
modify it. When mailing papers, insert a cardboard stiffener to keep pages
from being damaged. Do not crease. Don't forget to return the author's
release form. Do not use the FAX number below for material to be published,
the quality is not good enough.

Send to:
        Keith Justice, KF7TP
        E. Kael St

Mesa, AZ 85213

Voice: 602-461-8687 2652
FAX: 602-461-0716

E-mail: kf7tp@kf7tp.stat.com
FTP: cirs1.cirs.org
anonymous login
Dir: /pub/TAPR

5. TAPR 95 Annual Meeting

From: Greg Jones <gjones@tenet.edu>
Date: Wed, 21 Dec 1994 16:13:10 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199412212213.QAA22030@Kay-Abernathy.tenet.edu>
Rendered body type: text/plain

Tucson Amateur Packet Radio December 21, 1994

TAPR 1995 Annual Meeting to be held in St Louis

TAPR 1995 Annual Meeting * March 3, 4, & 5 * St. Louis, Mo

Join some of the brightest and most enthusiastic of today's packet developers/users, with a weekend full of Packet Radio and Digital Communications talks, presentations, SIG meetings, and two SPECIAL Sunday Workshops. In addition, an advanced DSP symposium is planned for Friday, March 3rd.

TAPR 1995 Annual Meeting

TAPR's annual meeting will be co-hosted by MoAmPS (Missouri Amateur Packet Society) on March 3rd, 4th, and 5th, 1995, in St Louis, Mo. TAPR (Tucson Amateur Packet Radio), a non-profit research and development corporation, works on the advancement of digital communications and education. This year's annual meeting will be the first held outside of Arizona and presents a unique opportunity for those unable to travel to Tucson to attend meetings.

The annual meeting informally begins Friday afternoon with the opening of the hospitality suite and continues later that evening with dinner. Dinner is always low-key and provides a great opportunity for those who arrive Friday to discuss and chat about projects before the rest of the weekend begins. Friday evening, after dinner, the Regional Networkers Special Interest Group will met.

An advanced DSP symposium will be held Friday, March 3rd starting at 3pm, through dinner (which will be provided), and concluding sometime that evening. The purpose of the Friday symposium is to bring developers of DSP technology together to discuss future directions and technology. The DSP symposium will be conducted by Jon Bloom, KE3Z.

The annual meeting formally begins Saturday morning with presentations and papers, as well as discussion on other projects of interest throughout the day. Issues concerning packet networking and BBS operation are also anticipated. Lunch will be up to the participant this year. Facilities at the College will be available to cater individual tastes. Dinner will be held after the Saturday afternoon session and will include a prize drawing. After dinner, Special Interest Groups will meet and discuss issues.

On Sunday, two workshops will be held. One will focus on Error Correction Techniques, by Phil Karn, KA9Q, while the second will focus on higher level interests for the development of hardware/software for the TAPR/AMSAT DSP-93, by Bob Stricklin, N5BRG.

These are exciting times for digital communications and TAPR. This year's meeting should be a super-charging event for everyone who can attend!

Call for Papers

Papers are welcome from everyone. Although there is limited time during the weekend, all attempts will be made to allow those present to talk. Deadline for submission of papers is Monday, February 7th, 1995. Contact the TAPR office to request an author's information package.

Meeting Place and Hotel

The TAPR Annual Meeting presentations, meetings, and workshops, will be held at the St. Louis Community College at Florissant Valley. Lodging will be at the Henry VIII Hotel and Conference Center, 4690 North Lindberg Blvd, St. Louis (Bridgeton), MO, 63044, Phone (lots of them): 800-325-1588, 800-392-1660 (in MO. only), 314 731-3040, or FAX 314 731-4210. Rooms rates are $58 for single or double or $68 will get you a "suite" for single or double. The hotel has a coffee shop and nice restaurant, with another restaurant/bar next to it (in same parking lot). It is approximately 4 miles west of St Louis Lambert Airport with shuttle service and approximately 10 miles book your room prior to Feb 4th, 1994.

Schedule of Events

Friday Afternoon, March 3rd
- Registration
- Hospitality Suite
- Informal Dinner
- Special Interest Group Meetings
- DSP Symposium, conducted by Jon Bloom, KE3Z

Saturday, March 4th
- Registration
- Presentations
- Lunch
- Presentations / Symposium
- Dinner
- Special Interest Group Meetings

Sunday, March 5th
- Special Error Correction Techniques Workshop
  conducted by Phil Karn, KA9Q
- Special DSP-93 Workshop
  conducted by Bob Stricklin, N5BRG

Detailed conference information and schedule will be mailed to all pre-registered participants.

Annual Meeting Registration Costs

	(without dinner)	(with dinner)
Pre-Registration (before Feb 17th)	$15.00 *	$25.00 **
Late Registration or at door	$20.00 *	$30.00 **

* Annual Meeting Registration includes:
A copy of the TAPR 1995 Proceedings
Dinner Friday Night (pizza out)
Lunch is not included this year.
The College provides food facilities.

** TAPR Dinner Saturday evening (limited space),
Prize Drawing, Speaker (TBD)

DSP Developers Symposium, Friday

3pm. Conducted by Jon Bloom, KE3Z

Pre-Registration (before Feb 17th)	$10.00
Late Registration or at door	$15.00

Error Correction Techniques, Half-Day Workshop, Sunday

8:30am - 11:30am. Phil Karn, KA9Q

Pre-Registration (before Feb 17th)	$10.00
Late Registration or at door	$15.00

TAPR/AMSAT DSP-93, Half-Day Workshop, Sunday

12noon - 3:00pm. Bob Stricklin, N5BRG

```
Pre-Registration (before Feb 17th)         $10.00
Late Registration or at door               $15.00


------------------------------------------------------------------------
Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
Voice: (817) 383-0000  Fax: (817) 565-2544  Internet: tapr@tapr.org
```

6. TAPR Internet Server

```
From: Greg Jones <gjones@tenet.edu>
Date: Wed, 21 Dec 1994 19:05:13 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199412220105.TAA22540@Joyce-Perkins.tenet.edu>
Rendered body type: text/plain
```

The TAPR Internet system is about to move into its final home.

In order to host everything we need to on the system we are moving to, we need to furnish our own disk space. This will allow us to make ftp, listserv, and in the future other resources available from one site.

We are looking for a 1Gig SCSI HD and SCSI interface card (i.e. Adaptec 1542C controller). If anyone might have something to donate to TAPR for this project, please contact tapr@tapr.org

Happy Holidays. TAPR

7. TAPR Fax Number

```
From: Greg Jones <gjones@tenet.edu>
Date: Thu, 22 Dec 1994 15:03:37 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199412222103.PAA03451@Alice-Thurman.tenet.edu>
Rendered body type: text/plain
```

```
: ------------------------------------------------------------------------
: Tucson Amateur Packet Radio
: 8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
: Voice: (817) 383-0000  Fax: (817) 565-2544  Internet: tapr@tapr.org
```

Sorry - I put the wrong fax number down on the annual meeting notice.

The TAPR Fax is : (817) 566-2544

Cheers - Greg

8. TAPR Listserv

```
From: Greg Jones <gjones@tenet.edu>
Date: Thu, 29 Dec 1994 21:55:55 -0600 (CST)
To: bbssig@tapr.org (BBS SIG mailing), netsig@tapr.org (NETSIG mailing),
        aprssig@tapr.org, tapr-bb@tapr.org (TAPR-BB mailing),
        tapr-board@tapr.org (TAPR Board)
Message-ID: <199412300355.VAA17396@Alice-Thurman.tenet.edu>
Rendered body type: text/plain
```

Hi TAPR Internet folks.

As you may have noticed, your incoming e-mail box has been filled up with a batch of mail from the TAPR info server.

During the Xmas holidays and system hosed up and with our sysop gone out of town it has just now been corrected.

Thanks for the many messages I received letting us know we had a problem.

Shortly we will be moving to our final home and more than one person will have access to the system, which should allow quicker response to these type of problems when Lee is unavailable.

I would like to thank Lee, N5LYT for his terriffic support on the system. Without his help to date, the TAPR info server would not be as well managed as it is currently.

Happy New Years everyone.

Greg

9. DSP-93 March 1995 Production Deadline

From: Greg Jones <gjones@tenet.edu>
Date: Sat, 31 Dec 1994 04:09:02 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing), amsat-bb@amsat.org
Message-ID: <199412311009.EAA15489@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

DSP-93, TAPR/AMSAT Joint DSP Project

Re: March 1995 Production Deadline

The deadline for the March 1995 production run is being extended until January 15th, 1995. It has come to our attention that many have thought that with the TAPR office being closed (i.e. not answering the phones) that no orders would be taken. To make sure we allow everyone who wants to get a DSP-93 kit in the March production we are changing the deadline to this later date.

As a note, the cost of the kit with 9v wall transformer for countries that use 110V, 60Hz is $430. If you live in a country that can not use this supply, indicate that on the order. The cost without the wall transformer is $420 for those countries.

Shipping and Handling is additional. Foreign orders should inquiry with the office concerning the shipping costs.

Currently, we have 90+ orders placed for the March production. The production is scheduled for 150 units. As with the last order, money will be deposited on January 15th to cover the parts that arrive in the period before shipping.

If you want to follow the DSP-93 build of the first production, you can send e-mail to 'listserv@tapr.org', subject 'request', message 'get tapr taprinfo.txt'. This file will explain how to get enrolled to our various mail groups, which dsp-93 (for builders) is one of.

Hope that helps and we wish everyone a happy new year!

Cheers,

Greg, WD5IVD (TAPR)
Robert Diersing, N5AHD (AMSAT)

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337, Tucson, Az, 85749-9399
Phone: (817) 383-0000, Fax: (817) 566-2544, e-mail: tapr@tapr.org

January 1995

Original source file: tapr-bb.9501
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1995-01/TAPR-BB_1995-01.txt

1. TrakBox problem

```
From: Greg Jones <gjones@tenet.edu>
Date: Sun, 1 Jan 1995 12:53:57 -0600 (CST)
To: amsat-bb@Alice-Thurman.tenet.edu, tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199501011853.MAA02347@Alice-Thurman.tenet.edu>
Rendered body type: text/plain
```

Just as a note, TAPR is aware of the problem folks have been having with the
TrakBox firmware. Jack Davis, WA4EJR, is working on the issue.

We will make a full announcement as soon as a solution has been made
available to us from the designers.

Cheers - Greg, WD5IVD

```
------------------------------------------------------------------------------
President -- Tucson Amateur Packet Radio Corp
------------------------------------------------------------------------------
TAPR Office (817) 383-0000  | Internet: gjones@tenet.edu
------------------------------------------------------------------------------
```

2. TrakBox problems (followup)

```
From: Greg Jones <gjones@tenet.edu>
Date: Sun, 1 Jan 1995 19:04:18 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing),
        amsat-bb@amsat.org (AMSAT BB Mail Group)
Message-ID: <199501020104.TAA03433@Alice-Thurman.tenet.edu>
Rendered body type: text/plain
```

Active TrakBox users were made aware of the new year by a nasty problem
raising its ugly head. It is currently being addressed and a solution
will be posted here, Compuserve and on the digital birds as soon as it is
available.

Dave Medley (KI6QE) called early this morning to offer the following
suggestion. Simply reset the clock using the following example.

94/12/32 time UTC   This is the normal format except the date portion.

I tried it and it seems to be working beyond the current day which is
the first of January.

Please spread the word and stay tuned for a permanent solution.

73

Jack Davis - WA4EJR
TAPR TrakBox Manager

3. TAPR: TrakBox Update on Firmware Correction

```
From: Greg Jones <gjones@tenet.edu>
Date: Fri, 6 Jan 1995 00:01:58 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing),
        amsat-bb@amsat.org (AMSAT BB Mail Group)
Message-ID: <199501060601.AAA24567@Alice-Thurman.tenet.edu>
Rendered body type: text/plain
```

TAPR: TrakBox Firmware Update   1/5/95

As most active TrakBox users must know by now, there is a bug in
firmware versions 3.30a through 3.30h. The problem relates to the
the clock settings - now that we are in the year 1995. New code is
available from various sources for the benefit of those users who
-have programming capability. The code will be posted on ko-23 and
ko-25 as soon as the birds are back in normal service. You can
also find the code in DL5 of the Hamnet SIG on Compuserve. We
expect it will become available in many more places after that as
users spread the word.

Thanks to Sueo Asato, JA6FTL, for providing version 3.30i so quickly.

For the benefit of users not having programming capability, TAPR will
start taking orders starting on Friday, Jan 6th. New ROMS will cost
$12 + $2 for US Shipping/Handling. Shipping will start when the office
resumes normal operations on Tuesday, Jan 10th, 1995.

If you received a TrakBox from TAPR after Nov 1, 1994, then contact the
office about the procedure to get your EPROM replaced.

Jack Davis, WA4EJR - TAPR TrakBox Manager

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
Voice: 817-383-0000
Fax: (817) 566-2544

NOTE: The TAPR Office opens full-time again on Tuesday, Jan 10th.
The office has been taking orders by fax and voice mail during the
holiday break.

4. TNC-2 1.1.9 Firmware Announcement

From: Greg Jones <gjones@tenet.edu>
Date: Tue, 10 Jan 1995 23:44:39 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing), aprssig@tapr.org (APRS SIG)
Message-ID: <199501110544.XAA02398@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

TAPR TNC-2 Release 1.1.9   Tuesday, January 10th, 1995

TAPR is proud to announce the release of version 1.1.9 for the TNC-2. 1.1.9
EPROMS with command booklet will be available from the office starting
January 10th, 1995. 1.1.9 will replace the current 1.1.8a being distributed
by TAPR.

Release 1.1.9 incorporates these new features:

o -   Modified P-Persistence
o -   Enhanced monitor mode filtering
o -   Support for Dallas Semiconductor RSmartwatchS (tm) socket
o -   NMEA beaconing mode
o -   CW identification in FSK using the onboard packet modem

And these changes:

o -   The pound sign ASCII character "#" is allowed in callsigns
o -   The "OUT" command installed in version 1.1.8 is removed
o -   In addition to identification at 9.5 minute intervals, the HID function
     transmits an identification packet upon incoming connect acknowledge,
     outgoing connect attempt success, disconnection, and cancellation of
     outgoing connect attempts.
o -   DWAIT is now applied to digipeated and non-digipeated packets
o -   Delay equivalent to the current DCD backoff time is applied after
     transmit release to prevent multiple transmissions with extremely small
     delays in between

NMEA Beacon Function
====================
TNC-2 now incorporates a dedicated mode enabling the broadcast of one or two
NMEA version 2.00 (and compatible) sentences to the UNPROTO address. When
placed in NMEA mode with a non-zero value in the NMEABCN parameter, the TNC
broadcasts the most recently received sentences received from the attached
NMEA talker on the radio link. No other outgoing transmissions are
permitted with the exception of identification, beacon, CTEXT, and mailbox
data (*if supported).

NMEA devices provide an ASCII output at 4800 baud, 8/N/1, consisting of one
or more types of sentences containing various types of data. Most commonly
these data contain navigation fixes. For example, the authorUs global
positioning system receiver (Garmin model GPS-55AVD) generates sentences
containing the receiverUs longitude and latitude (fix), time of the fix,
groundspeed, waypoint data, and the like.

An example:
$GPRMC,034523,Y,02754.31,N,08023.03,W,1.5,035,031294,4,W*23<cr><lf>

Meaning:
R$GPRMCS - Indicates the type of data (RMC-minimum recommended GPS sentence)
034523 - UTC hh/mm/ss
Y - data valid
02754.31,N - longitude
08023.03,W - latitude
1.5 - groundpseed
035 - Track made good over the ground (degrees true)
031294 - date ddmmyy
4,W - magnetic variation, West
23 - checksum (ignored by the TNC)

(Note that this example sentence was not actually generated by the unit and
the checksum is probably wrong)

Modified P-Persistance
======================
P-persistance is a channel sharing technique that has gained great favor in
the TCP/IP world. A modified form of P-persistance It is now included in
TAPR TNC-2 as an alternative to priorized acknowledgements and DWAIT.

Modified P-persistance relies on two principles to achieve a more equitable
sharing of the common frequency. First, when the TNC waits a random
multiple of DWAIT after hearing another station before it transmits. The
upper limit of the random value is user defined by the PERSIST parameter to
prevent frequency monopolization by stations placing unusually heavy demands
on the frequency, as with the case of a file transfer. Modified
P-persistance increases the likelihood that a station with higher priority
traffic can acquire the channel.

The second way modified P-persistance promotes channel sharing is by
gradually increasing the wait time when the TNC executes retry
transmissions.

Modified P-persistance as implemented in TNC-2 differs from standard
P-persistance in that acknowledged retries do not cause the time delays to
cumulate. After a retry is successfully acknowledged the TNC reverts to the
shorter delay that assumes a perfect channel. Another difference is that
the retry delay is applied only to connections on stream A.

Monitoring Improvement
======================
The TNC will examine the contents of each monitored packet for nonprinting
ASCII characters and discard the entire packet if at least one is detected.
Nonprinting characters means any ASCII character less than the space
character except for BELL, LF, and CR, and the DEL character. The test
occurs after masking off the high order bit. By setting MNONPRIN to OFF,
and in concert with MNONAX25 OFF, the TNC will filter nearly all
screen-garbage inducing monitored packets.

The 1.1.9 TNC-2 executable is (c) 1994 InfoMotion, Inc. All rights
reserved.

TNC-2 firmware is provided "AS-IS" AND THE USER ASSUMES THE ENTIRE RISK OF
UTILIZING THE FIRMWARE. TNC-2 FIRMWARE IS NOT INTENDED NOR IS IT PROVIDED
FOR ANY PURPOSE, INCLUDING NAVIGATION, WHEN FAILURE OF THE FIRMWARE, OR
HARDWARE, OR BOTH, MIGHT CAUSE BODILY INJURY OR LOSS OF PROPERTY.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
Office: (817) 383-0000 * Fax: (817) 566-2544 * TAPR@TAPR.ORG

5. TAPR on RAIN

From: Greg Jones <gjones@tenet.edu>
Date: Thu, 12 Jan 1995 03:08:25 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)

Message-ID: <199501120908.DAA11052@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

TAPR on RAIN (Radio Amateur Information Network)

We have been informed that the TAPR presentation given at Dayton '94 on 'Packet Radio for the Beginner' will be broadcast beginning on Friday, January 13th, 1995 by RAIN (Radio Amateur Information Network). Hap Holly, KC9RP, said that the presentation would be done over two segments.

The presentation given at Dayton in 1994, focuses on how amateurs can get on packet radio from the What? Why? and How? perspectives. What is packet radio, why should you want on packet radio, and how you get on packet radio (equipment and other items).

TAPR would like to thank RAIN for this chance to further our educational efforts.

6. FYI--Hot news!: Vanity Call Sign News Release (fwd)

From: Greg Jones <gjones@tenet.edu>
Date: Tue, 24 Jan 1995 23:22:23 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199501250522.XAA29976@Gayle-Gaston.tenet.edu>
Rendered body type: text/plain

According to Battles, Brian, WS1O:
>From bbattles@arrl.org Tue Jan 24 18:36:22 1995

From: Jahnke, Bart, KB9NM
To: 'arrl-ve-list'
Subject: Vanity Call Sign News Release
Date: Tuesday, January 24, 1995 17:15

Late-breaking news!
-- Bart Jahnke, KB9NM, ARRL/VEC Manager

_____
FCC NEWS

Report No. DC95-19 ACTION IN DOCKET CASE January 24, 1995

COMMISSION AMENDS AMATEUR SERVICE RULES TO IMPLEMENT A VANITY CALL SIGN SYSTEM

(PR DOCKET NO. 93-305)

In recognition of the strong sense of identity among amateur operators that's grounded in the call signs of their stations, the Commission has decided to offer a vanity call sign system to the amateur service community. The Commission will also resume issuing new club and military recreation station licenses. The Commission said these actions are fundamental to its commitment to putting the needs of people first in providing the services they want.

Each new amateur station licensed by the FCC is assigned a unique call sign. An automated process selects the call sign in accordance with the sequential call sign system. Until recently, the Commission was unable to accommodate the many thousands of requests for call signs of the licensee's choice. The Commission stated that one of its many steps in reinventing Government is to implement new licensing processing capabilities that make it practicable to grant such requests.

The Commission will implement the new system by using a series of four "starting gates." Gate One would allow a previous holder of a call sign to apply for that call sign or, where the holder is deceased, a close relative could apply. Gate Two would allow the 66,000 Amateur Extra Class operators, who have passed the most difficult license examinations, to apply. Gate Three would allow the 112,000 Advanced Class operators, who have passed the second most difficult license examinations, to apply; and Gate Four would open the system to any licensee, including a club station license trustee applying for the call sign of a deceased former holder. The Commission will announce the opening of each gate by a Public Notice. The first gate will open as soon as the new application form, FCC Form 610-V, is available and the Commission's licensing facility is prepared to begin procesing the applications.

With respect to new club station licenses, the Commission stated that persons not already holding a club station license must first apply for and receive a license before filing an application with the fee collection contractor requesting that the license be modified to show a vanity call sign. However, the Commission will begin accepting applications for new club and military recreation station licenses on the date the Report and Order in this proceeding becomes effective.

Action by the Commission December 23, 1994, by Report and Order (FCC 94-343). Chairman Hundt, Commissioners Quello, Barrett, Ness and Chong.

-FCC-

News Media contact: Patricia Chew at 202-418-0500.
Wireless Telecommunications Bureau contact: Maurice Depont at 202-418-0690.

7. ftp.tapr.org and www.tapr.org

From: Greg Jones <gjones@tenet.edu>
Date: Wed, 25 Jan 1995 01:09:07 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199501250709.BAA12568@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

TAPR announces new FTP and WWW site Jan 25, 1995

TAPR is proud to announce the opening of 'ftp.tapr.org' and 'www.tapr.org'. Both of these resources are available now.

==========

ftp.tapr.org

Our new ftp site will allow full access to the TAPR software library while providing space for SIGs, on-going projects, and access to the various files and information that had been available only on listserv@tapr.org.

Access is available for anonymous login, using a password of 'your_account@your_address'. When accessing, all files and subdirectories are available in the tapr sub-directory.

```
tapr/
   dsp93/            (files regarding the TAPR/AMSAT dsp-93 project)
   projects/         (closed area for on-going TAPR projects)
   taprinfo.txt       file on tapr general info
   general/          (general file regarding packet radio)
      9600baud/         (files regarding 9600 baud)
   psr/              (text versions of back issues of the PSR)
   utils/            (general utils)
   SIG/              (SIG directory, contains files, and will contain
      aprssig/         archives in the future)
      bbssig/
      hfsig/
      netsig/
   info/             (TAPR information)
      kit/              (information, prices, orderform, on kits)
   software_lib/     (TAPR software library)
      utils/
      tcpip/
      misc/
      tnc/
      switch/
      terminal/
      sat/
      bbs/
```

ftp.tapr.org will continue to develop in the coming weeks as more files from previous systems are brought on-line.

==========

www.tapr.org

With the new site comes an expanded and more dynamic set of WWW pages. While the initial pages will look somewhat like the old pages, we will not be under the limitations we were with the original site. Howie, N2WX, will continue to manage the pages.

You can reach the TAPR WWW pages at 'http://www.tapr.org/tapr'

If you have comments or suggestions, Howie can be reached via the home page.

==========

As a reminder, this site is made possible by those who support TAPR as members. TAPR would like to thank the membership for there support and without whose membership, the money for this site would not have been possible. While Internet is a great resource for all, the money for this type effort must be generated. Membership is that device.

February 1995

Original source file: tapr-bb.9502
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1995-02/TAPR-BB_1995-02.txt

1. ARRL Digital Conference

From: Greg Jones <gjones@tenet.edu>
Date: Fri, 3 Feb 1995 18:27:05 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199502040027.SAA05136@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

Announcement and First Call For Papers

ARRL DIGITAL COMMUNICATIONS CONFERENCE
September 8-10
Arlington, Texas, U.S.A.

Mark your calendar and start making plans to attend the year's premier event in digital communications. The 14th Annual ARRL Digital Communications Conference will be held September 8-10, 1995, in Arlington, Texas -- just minutes from the Dallas/Ft. Worth Airport. Co-hosts for the Conference are TAPR and the Texas Packet Radio Society.

The ARRL Digital Communications Conference is an international forum for radio amateurs and experts in digital communications, networking, and related technologies to meet, publish their work, and present new ideas and techniques for discussion. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications.

Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the Conference is not required for publication. Papers are due by July 21, 1995, and should be submitted to Maty Weinberg, ARRL, 225 Main St., Newington, CT 06111 U.S.A. or via Internet at lweinberg@arrl.org. Please contact Maty for detailed format requirements.

The hotel/conference center is extremely well suited and well sited for this event. They regularly host other communications-related events and staff members are very familiar with the sight of satellite dishes springing up on the lawn! They and we are looking forward to a tremendous conference. We hope YOU can be part of it!

For more information on the Conference, registration, and hotel reservations please contact TAPR at the address below:

TAPR
8987-309 E. Tanque Verde Rd. #337
Tucson, AZ 85749-9399, U.S.A.
Phone: (817) 383-0000
Fax: (817) 566-2544
Internet: tapr@tapr.org

[2-3-95]

2. Update on 1995 TAPR Annual Meeting

From: Greg Jones <gjones@tenet.edu>
Date: Fri, 10 Feb 1995 02:15:48 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199502100815.CAA01832@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

TAPR 1995 Annual Meeting
March 3rd - 5th, St. Louis, Mo.

Annual meeting preparations continue and preregistration has been steady. If you think you will be attending, you can save some money and help TAPR set reservation levels by preregistering. The meeting is set for March 3rd, 4th, and 5th, 1995, in St Louis, MO. Information will be mailed to all preregistered folks before the meeting. If you are staying at the hotel, it is HIGHLY recommended that you make your room reservations as soon as possible. When making reservations, indicate that you are attending the TAPR meeting. The annual meeting hotel is Henry VIII, (800) 325-1588, in MO call (800) 392-1660. It is located on Lindbergh (US 67) one-half mile north of I-70 and one mile south of I-270.

Meeting Registration and TAPR Hospitality room will open in the Henry VIII hotel starting at 12noon on Friday in the London room. The room is located directly above the hotel lobby. On Saturday, registration will move to the College.

There have been a lot of questions concerning the Friday DSP symposium. First, the cost of the symposium has been dropped. Everyone who has preregistered and paid for the Friday symposium will not be charged. The reason for this change is that there are now no associated costs with the symposium. In addition, the dinner will no longer be offered, since it is now planned to hold the symposium from 3pm till 6:30pm on Friday. This will allow everyone attending the symposium, to make the TAPR informal dinner on Friday. The purpose of the symposium is to bring DSP programmers together to discuss tools and programming techniques. This is for those working with DSP technology. Location for the symposium will be provided with the preregistration packet and be available at the hospitality suite on Friday. Currently it is planned for the hotel, but this might change to college depending on space at the hotel. Jon Bloom, KE3Z, will be hosting the symposium.

Friday evening around 6:30pm to 7pm, TAPR will host its informal dinner. Location for this event has not be determined as of this writing. Contact the office, preregister, or come by the hospitality after 12noon Friday to get the location. The hospitality room will open again after dinner to provide a location for late night discussions.

The annual meeting formally begins Saturday morning at 8:30am with presentations and papers, as well as discussion on other projects of interest throughout the day. Registration will begin at 8am. The location will be the St. Louis Community College at Florissant Valley, 3400 Pershall Rd, along I-270, east of I-170 and west of West Florissant Ave. The TAPR meeting will be held in the Theater, which is on the north side of the campus. Parking is available to the west of the buildings. If you need to drop someone off or require handicap parking, a driveway runs directly in front of the theater.

For Lunch on Saturday, TAPR is working on providing lunch at a slight additional cost for those that do not want to venture off campus. Lunch was not included in the original meeting price, because it was expected that the main food area would be available for our use. As of late December, the college has scheduled a major event which now occupies these areas and eliminates our ability to offer an open lunch. If you think you would be interested in Lunch, please can contact the office and put your name on the lunch list. Money for lunch will be collected Saturday morning during registration.

The tentative schedule as of this date is listed below. Lunch is scheduled from 12noon till 1:30pm when the afternoon session begins. The last session of the day will be a breakout for two discussion topics. Currently HF digital communications, hosted by Johan Forrer, KC7WW, is one of these. Some table space will be provided in the foyer of the theater for those wishing to setup demos or handout materials. If your regional group wishes to provide handouts to be distributed at the meeting. Contact Mel Whitten, K0PFX, k0pfx@tapr.org, annual meeting chair for details on either subject.

After the last session at the college, dinner will be held back at the hotel. The dinner will include a speaker and prize drawing! After dinner, Special Interest Groups will meet to discuss issues. On Sunday, two half-day workshops will be held. One will focus on Error Correction Techniques, by Phil Karn, KA9Q, while the second will focus on higher level interests for the development of hardware/software for the TAPR/AMSAT DSP-93, by Bob Stricklin, N5BRG. The workshops will be held at the College.

Transportation between the hotel and college, for those not having cars, will be made available. TAPR will be renting one 15 person van as a shuttle to run throughout the day and several St Louis hams have volunteered the use of their vans during the morning and evening rushes. Full details on the van schedule and times of transportation will be sent with preregistration information and be available during registration on Friday. If you think you need will require the use of transportation, please inform the office so we can estimate a count.

All indications show that this will be a well-attended annual meeting and we are hoping that the weather cooperates. See you in St Louis.

==========

Tentative Schedule as of 2/10/95.

```
March 3rd, Friday
-----------------
12noon            Hospitality Suite / Registration (Hotel, London Room)
3:00pm - 6:30pm   DSP Developers Symposium (Hotel, Room TBD)
7:00pm - 8:30pm   Informal TAPR Dinner
9:00pm            NETSIG Meeting (Hotel, Room TBD)
9:00pm            Hospitality Suite Re-Opens (Hotel: London Room)

March 4th, Saturday
-------------------
8:00am            Registration at College (Theater) Opens
8:30am - 10:00am  Session 1
10:00am - 10:30am Break 1
10:30am - 12noon  Session 2
12noon - 1:30pm   Lunch
1:30pm - 3:00pm   Session 3
3:00pm - 3:30pm   Break 2
3:30pm - 5:30pm   Session 4: Breakout Sessions
                     a) HF SIG / HF Digital Issues (Theater)
                     b) TBD
7:00pm - 9:00pm   Dinner / Speaker / Prize Drawing (Hotel)
9:00pm            President's Open Discussion (Room TBD)
                  BBS SIG Meeting (Room TBD)
                  APRS SIG Meeting (Room TBD)

March 5th, Sunday
-----------------
8:00am            Registration at College (Theater) Opens
8:30am - 11:30am  Half-Day Workshop:
                    Error Correction Techniques, Phil Karn, KA9Q
12noon - 3:30pm  Half-Day Workshop:
                    TAPR/AMSAT DSP-93, Bob Stricklin, N5BRG
```

3. TAPR/AMSAT DSP-93 April Production

From: Greg Jones <gjones@tenet.edu>
Date: Fri, 10 Feb 1995 02:27:38 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199502100827.CAA01983@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

```
TAPR/AMSAT DSP-93 April Production                              2/10/95
-------------------------------------------------------------------------

TAPR is still taking orders to fill the 175 units being produced for the
April TAPR/AMSAT DSP-93 Production.  If you are interested in getting a
DSP-93, this is your chance.  The next production, after April, is scheduled
for Sept/Oct time frame.


-------------------------------------------------------------------------
Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
```

4. Lunch at Annual Meeting

From: Greg Jones <gjones@tenet.edu>
Date: Sun, 12 Feb 1995 22:01:09 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199502130401.WAA25875@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

```
Saturday Lunch Special
----------------------

If you don't want to leave the campus to have lunch during the TAPR annual
meeting, we have arranged with the college to provide a limited number of
box lunches.  The box lunch consists of a Ham Sandwich, Chips, Cookies, and
Ice Tea.  The cost of the lunch is $5.00 per person.  If you wish to
purchase a lunch, you can contact the office and pay for your lunch early or
reserve a lunch for payment when you register at the meeting. There are
limited lunches available.
```

5. Opps!

From: Greg Jones <gjones@tenet.edu>
Date: Mon, 13 Feb 1995 01:44:19 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199502130744.BAA12898@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

I zapped the file I had saved with the times when folks were arriving.

Can everyone send me their arrival times again.

Greg

6. Re: Opps!

From: Greg Jones <gjones@tenet.edu>
Date: Mon, 13 Feb 1995 10:18:52 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199502131618.KAA16595@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

Opps again -- the arrival time message was for the tapr-board list and not tapr-bb. My mistake. Please disregard.

Cheers - Greg

7. Call for Presentations

From: Greg Jones <gjones@tenet.edu>
Date: Mon, 13 Feb 1995 22:17:36 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199502140417.WAA21750@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

TAPR Annual Meeting Presentation Schedule

We are finalizing the presentations for Saturday of the annual meeting. If you would like time during the presentation sessions to present information, please let us know. E-mail wd5ivd@tapr.org for full details. There is time for regional groups to provide information and details on what they are doing, but we need to schedule the time so that everyone can present.

It is not a requirement for presenting to have something in the proceedings. So, let us know before Feb 18th.

Cheers - Greg

8. TAPR 1995 Board of Director Elections

From: Greg Jones <gjones@tenet.edu>
Date: Wed, 15 Feb 1995 21:39:16 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199502160339.VAA00432@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

TAPR 1995 Board of Director Elections

TAPR is proud to announce the results of the 1995 board of director elections. The following individuals will serve a three year term on the TAPR board:

Barry McLarnon, VE3JF
John Ackermann, AG9V
Jim Neely, WA5LHS

Cheers -- Greg Jones, WD5IVD
President, TAPR

P.S. We look forward to seeing everyone in St Louis.

9. TAPR.ORG Downtime

From: Greg Jones <gjones@tenet.edu>
Date: Thu, 16 Feb 1995 11:25:44 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing), hfsig@tapr.org (HF SIG mailing), netsig@tapr.org (NETSIG mailing), bbssig@tapr.org (BBS SIG mailing), fccreg@tapr.org (fcc), tapr-board@tapr.org (TAPR Board), pcs@tapr.org (TAPR PCS Project), dsp-93@tapr.org (DSP-93 Build), dsp93dev@tapr.org (DSP93 Development), aprssig@Alice-Thurman.tenet.edu, tuc52@tapr.org (TUC-52), tnc95@tapr.org (TNC-95)
Message-ID: <199502161725.LAA03238@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

TAPR.ORG Downtime 2/16/95

The TAPR.ORG system will be moving locations on Monday morning, February
20th, 1995.

During this move, the system will be unavailable. A second message will be
posted when the system is fully operational.

10. TAPR Annual Meeting Update

From: Greg Jones <gjones@tenet.edu>
Date: Fri, 17 Feb 1995 00:21:22 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199502170621.AAA01048@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

Here is the update as of 2/17/95
================================

** See below for Saturday Lunch and Transporation Information

TAPR 1995 Annual Meeting   Overall Schedule as of 2/17/95

March 3rd, Friday

  12noon   - 6:30pm   Hospitality Suite / Registration (Hotel: London)
   3:00pm - 6:30pm   DSP Developers Symposium (Hotel: Windsor)
   7:00pm - 8:30pm   Dinner (Hotel: Windsor)
   9:00pm   NETSIG Meeting (Hotel: Windsor)
                       Hospitality Suite Re-Opens (Hotel: London)

March 4th, Saturday

   8:00am   Registration at College (Theater)
   8:30am - 10:00am   Session 1: Presentations
  10:00am - 10:30am   Break 1
  10:30am - 12noon   Session 2: Presentations
  12noon   - 1:30pm   Lunch (Limited Box Lunch Special)
   1:30pm - 3:00pm   Session 3: Presentations
   3:00pm - 3:30pm   Break 2
   3:30pm - 4:00pm   Session 4: Presentations
   4:00pm - 5:30pm   Breakout Sessions
                         a) HF SIG / HF Digital Issues, Johan Forrer, KC7WW
                            (Social Sci 101)
                         b) Current Issues in TCP/IP, Barry McLarnon, VE3JF
                            (Theater)

   7:00pm - 9:00pm   Dinner / Speaker / Prize Drawing (Hotel: Wiltshire)

   9:00pm   Hospitality Suite (Hotel: London)
                       President's Open Discussion (Hotel: Wiltshire)
                       BBS SIG Meeting (Hotel: Windsor)
                       APRS SIG Meeting (Hotel: London)
                       PCS Technology Discussion, Tom McDermott, N5EG
                        (Hotel: Wiltshire)

March 5th, Sunday

   8:00am   Registration at College (Theater) Opens
   8:30am - 11:30am   Morning Workshop (Theater)
                         Error Correction Techniques, Phil Karn, KA9Q

  12noon   - 3:00pm   Afternoon Workshop (Social Sci 101)
                         TAPR/AMSAT DSP-93, Bob Stricklin, N5BRG

==

TAPR 1995 Annual Meeting   Presentation Schedule as of 2/16/95

Times inside each session are approximate. Each session will begin on time.
Time will be available after each presentation for limited questions from
the audience.

Session 1, 8:30am - 10:00am (90 mins)

```
   8:30am   Welcome - Mel Whitten, K0PFX and Greg Jones, WD5IVD
   8:40am   DSP-based Multimedia Sound Cards for DSP Development Platforms:
            Possibilities and Future Trends.  Johan Forrer, KC7WW (25 min)
   9:10am   TAPR/AMSAT DSP-93, Overview.  Bob Stricklin, N5BRG.
            D93WE Windows Development Environment. Tom McDermott, N5EG (40 mins)
   9:50am   TAPR TNC-95 Project Update.  John Koster, W9DDD (10 min)


Session 2, 10:30am - 12noon (90 mins)
-------------------------------------
  10:30am   Modem Channel Response.  T. C. McDermott, N5EG (25 min)
  11:00am   A Simulation of the G-TOR Hybrid ARQ Protocol.
            Phil Anderson, W0XI, Kantronics (25 min)
  11:30am   Considerations for Automatic Gain Control in DSP Receivers & Modems.
            Glenn Prescott, WB0SKX, and Richard Huslig, Kantronics (25 min)
  11:55am   Before Lunch Announcements


Session 3, 1:30pm - 3:00pm (90 mins)
------------------------------------
   1:30pm   Advances in APRS Technology.  Keith Sproul, WU2Z and
            Mark Sproul, KB2ICI (25 min)
   2:00pm   The National Weather Service St. Louis, Missouri Packet Weather Wire
            James P. Kramer, KB0NMT (25 min)
   2:30pm   Hierarchical Addressing Protocol.  Dave Wolf, WO5H (10 min)
   2:45pm   Packet BBS Address Proposal, Karl F. Larsen K5DI (15 min)


Session 4, 3:30pm - 5:30pm
--------------------------
   3:30pm   Day of Meeting Presentations (TBA)
   4:00pm   Breakout Sessions
              HF SIG / HF Digital Issues, Conducted by Johan Forrer, KC7WW
              Current issues in TCP/IP.


Banquet Speaker
---------------
     SETI Made Simple:  What Can We Do?
     Dr. H. Paul Shuch, N6TX


======================================================================

Saturday Lunch Special
----------------------
If you don't want to leave the campus to have lunch during the TAPR annual
meeting, we have arranged with the college to provide a limited number of
box lunches.  The box lunch consists of a Ham Sandwich, Chips, Cookies, and
Ice Tea.  The cost of the lunch is $5.00 per person.  If you wish to
purchase a lunch, you can contact the office and pay for your lunch early or
reserve a lunch for payment when you register at the meeting. There are
limited lunches available.


Transportation
--------------
Van Transportation Schedule
We have transportation available for conference participants registered at
the Henry VIII hotel that need a ride to and from the college.  Please make
your request with the registration desk, in the Hospitality Room (London),
so a departure time may be assigned.  Please be in the Hotel lobby a few
minutes before departure.  Look for the van's identified with a "TAPR
TRANSPORT" sign.  The hotel will also be providing us with transportation in
their van.  A conference committee member will be in the lobby to help
direct you to the vans.

If you need a ride back to the hotel during the conference, ask someone at
the registration table (theatre foyer).  The van will be departing at the
front of the college theatre.  Transportation availability announcements
will be made prior to the morning and afternoon sessions.  A return trip to
the hotel is scheduled at the end of each session.  At the end of the day,
every effort will be made to accommodate everyone on the first trip.  If you
have an opportunity to obtain a ride back to the hotel from someone at the
conference with a car, please do.  This will help us eliminate any delays
due to transportation.  Your cooperation is appreciated.

Hotel to College: Departure Times
Saturday and Sunday - 1st Run at 7:15am
```

Saturday and Sunday - 2nd Run at 7:55am
If needed, a 3rd run will me made at approximately 8:40am for those who
forgot to set their alarm.

College to Hotel: Departure Times
Saturday (end of conference) - 1st Run at 5:30pm
Saturday (end of conference) - 2nd Run at 6:20pm
Sunday - 1st Run at 12noon
Sunday - 2nd Run at 3:45pm

For other departure times during the conference, speak with a Conference
Committee member at the registration desk to help with transportation
issues.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000

11. Need input on Sept 95 DCC

From: Greg Jones <gjones@tenet.edu>
Date: Sat, 18 Feb 1995 23:56:00 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199502190556.XAA16286@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

The 1995 ARRL DCC (Digital Communications Conference) Committee is looking for
input on what folks might feel would be an interesting Workshop for Sunday ?

Have a thought, comment, or suggestion ?

Send e-mail to gjones@tenet.edu

A workshop on Friday (late) afternoon on APRS is already scheduled.

12. TAPR.ORG Location Change

From: Greg Jones <gjones@tenet.edu>
Date: Mon, 20 Feb 1995 15:23:15 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing), bbssig@tapr.org (BBS SIG mailing),
netsig@tapr.org (NETSIG mailing), dsp-93@tapr.org (DSP-93 Build),
hfsig@tapr.org (HF SIG mailing), aprssig@tapr.org
Message-ID: <199502202123.PAA09624@Joyce-Perkins.tenet.edu>
Rendered body type: text/plain

TAPR.ORG has been relocated and has a new numeric IP address of:

   204.96.214.85

DNS servers should have been updated starting yesterday.....but just in case
yours is a little slow, you can use the numeric IP until things get fully
updated.

The new location allows for a faster connection into Internet which should
help the site in the long run.

Thanks to Lee, N5LYT, for his continued help and effort on the TAPR.ORG
site.

Cheers - Greg

13. [TAPR-BB:64] TrakBox firmware update now available from ftp.tapr.org (fwd)

From: Greg Jones <gjones@tenet.edu>
Date: Wed, 22 Feb 1995 20:58:16 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199502230258.UAA15703@Joyce-Perkins.tenet.edu>
Rendered body type: text/plain

Sender: nielsen@primenet.com (Bob Nielsen)
Subject: TrakBox firmware update now available from ftp.tapr.org

The latest firmware update for the TrakBox is now available from the
ftp.tapr.org server (204.96.214.85 note that this is a new ip address, in
case you missed Greg's earlier posting. You may need to use the ip address
for a few days until the DNSs all get the correct stuff.)

It is in /tapr/software_lib/sat/trk330i.zip

Thanks to Jack Davis, WA4EJR for providing this.

```
-------
Bob Nielsen                Internet: nielsen@primenet.com
Tucson, AZ                 AMPRnet: w6swe@crc.w6swe.ampr.org
                           WWW: http://primenet.com/~nielsen/
```

March 1995

Original source file: tapr-bb.9503
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1995-03/TAPR-BB_1995-03.txt

1. PSR Deadline Upcoming

From: Greg Jones <gjones@tenet.edu>
Date: Tue, 7 Mar 1995 23:56:59 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199503080556.XAA08494@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

The Deadline for the upcoming PSR is March 15th, 1995.

Send articles to:

Bob Hansen, N2GDE
POB 1902
Elmira, NY
14902-1902

Internet: psr@tapr.org
     CI$: 71121,1007

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000

2. [TAPR-BB:69] PACK*BASH at Dayton (fwd)

From: Greg Jones <gjones@tenet.edu>
Date: Tue, 21 Mar 1995 19:39:54 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199503220140.TAA16627@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

Sender: jra@ag9v.ampr.org
Subject: PACK*BASH at Dayton

Dayton Activities

Attending the 1995 Dayton Hamvention? Then don't miss out on PACK*BASH!

What?
        A new event for the digitally-inclined ham, featuring:
        * Buffet dinner (with cash bar)
        * Nationally-known speaker holding forth on a current topic
        * Prize raffle
        * TAPR special interest group meetings
        * "Bird of a Feather" gatherings

When?
        Friday evening, April 28, 1995
        Dinner starts at 7:00 pm
        Speaker at 7:45
        Meetings to begin after the speaker

Where?
        TJ's Restaurant
        2462 Dryden Road, Dayton
        (Dryden Road exit, I75 -- across from the Holiday Inn)

How?
        Dinner requires advance registration and payment BY APRIL 24th, 1995.
        Seating for dinner only is limited, so register early! The cost is
        $16.00 per person, tax and tip included.

        All amateurs are welcomed to attend, enjoy the speaker, and
        particpate in the meetings, although only those purcashing a dinner
        can eat.

        To register, contact:
        PACK*BASH
        c/o TAPR
        8987-309 E. Tanque Verde Road #337
        Tucson, AZ   85749-9399

Phone: (817) 383-0000
Fax: (817) 566-2544
Internet: TAPR@TAPR.ORG

Visa/Mastercard Accepted

Who?
PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet Radio, the national leader in digital communication -- and the Miami Valley FM Association, Dayton's packet radio club.

For further information, contact TAPR, or email packbash@ag9v.ampr.org or BASH@N8ACV.#DAY.OH.USA.NOAM
--
John Ackermann AG9V
Internet: jra@ag9v.ampr.org
Packet: AG9V@N8ACV.#DAY.OH.USA

3. [TAPR-BB:70] Deviation Meter (fwd)

From: Greg Jones <gjones@tenet.edu>
Date: Wed, 22 Mar 1995 00:50:31 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199503220650.AAA17085@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

Sender: jebuckwalter@attmail.com (Jesse Buckwalter)
Subject: TAPR Member needs help

(Please send e-mail to Jesse directly)

Re: Deviation Meter

I would like from those of you that have installed the TAPR Deviation Meter. I have completed the kit and must acquire a receiver in which to install it.

I specifically would like recommendations about which scanners you have successfully used and which scanners I ought to avoid for use with the deviation meter.

Thank you.

Jesse Buckwalter, NZ3F jebuckwalter @ attmail.com
nz3f @ amsat.org

4. TAPR 1995 Annual Meeting Review

From: Greg Jones <gjones@tenet.edu>
Date: Wed, 22 Mar 1995 15:11:18 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199503222111.PAA11747@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

The following is to appear in the April PSR.
There is suppose to be some other articles outlining thoughts on the annual meeting from others.

==========

1995 TAPR Annual Meeting

TAPR's annual meeting was co-hosted by MoAmPS (Missouri Amateur Packet Society) on March 3rd, 4th, and 5th, 1995, in St. Louis, MO. The meeting took place at two locations. The Henry VIII Hotel and Conference Center was used all day Friday and for Saturday evening's events, with the majority of the presentations and workshops being held at the St. Louis Community College at Florissant Valley Saturday morning/afternoon and Sunday. The MoAmPS group did a terrific job in hosting the event and their valuable contribution and dedication to helping organize and manage the meeting was one of the largest reasons for its big success. Since this year's annual meeting was the first held outside of Arizona, the regional sponsors had a lot to live up to. Many thanks to Mel Whitten, K0PFX, and his great group of volunteers. Keith Justice, KF7TP, again collected the papers for the proceedings. Keith did another great job and the proceedings totaled 77 pages of excellent technical papers. Extra copies of the proceedings are available from the TAPR office.

A total of 160 people attended the meeting. Past TAPR meetings have seen between 80 - 100 people attend. The organizers were a little puzzled at the lower than expected attendance. We had planned on seeing 200 - 250 people attend the meeting. After some questioning, it was determined that many of

the intermediate people that had attended past MoAmPS spring meetings felt that the TAPR meeting would be above their heads. This is something TAPR will work on correcting for future years, since it is very important to get these operators involved with the organization. The weather might have also slightly reduced the turn-out. St Louis had been experiencing nearly spring-like weather the two weeks prior to the annual meeting, but winter returned for the TAPR meeting -- to our bad fortune.

The TAPR annual meeting officially began at 12noon on Friday with the opening of the Hospitality Suite and Registration. A majority of participants began to arrive throughout the afternoon and into the evening. The TAPR Board of Directors had arrived the night before (Thursday) and began their board meeting at 8:30am. Full details on the board meeting should appear later in this PSR.

At 3pm, the DSP Developers Symposium was held in the Windsor room. This was the first time that TAPR had attempted to hold a Friday session. Bob Stricklin, N5BRG, was kind enough to step in at the last minute for Jon Bloom, KE3Z, who was unable to attend and host the symposium as planned. The symposium was well attended and the discussion covered a wide range of topics. The goal of having actual developers meet and discuss on-going work and development was not achieved - something to be set as a goal for next year.

Friday evening the group met in the Windsor room again for the informal Friday dinner. The group attending devoured in short order the pizza that was delivered. We have to make sure we have more pizza next year (grin). After dinner, the NETSIG met (details in the SIG area). The meeting was well attended. During the annual meeting the chairs of the various SIGs (Special Interest Groups) met and it has been decided that a better plan will be implemented next year in regard to scheduling the SIGs -- to reduce conflicts and increase participation.

The annual meeting continued early Saturday morning with presentations and papers at the St. Louis Community College at Florissant Valley. The sessions were video taped and TAPR will review them to see if a tape can be produced and made available for distribution.

8:30am: Mel Whitten, K0PFX and Greg Jones, WD5IVD welcomed the group. In addition, Tim Childers, KB9FBI (from Illinois) of the ARRL, and Tom Bingham, of the college, welcomed the gathered group. Keith Justice, KF7TP, conducted the morning session. The attendants enjoyed the fact that a packet radio burst was being used to indicate presentation time was up. Session 1 began with a presentation on 'DSP-based Multimedia Sound Cards for DSP Development Platforms: Possibilities and Future Trends' by Johan B. Forrer, KC7WW. Johan discussed the possibilities of low cost PC based DSP-based multimedia sound cards being used in amateur applications. Discussion included general considerations, present status of sound cards, the future directions of work.

An overview of the 'TAPR/AMSAT DSP-93 project' was presented by Bob Stricklin, N5BRG. Tom McDermott, N5EG, overviewed the 'D93WE Windows Development Environment' for the TAPR/AMSAT DSP-93. Both DSP-93 presentations were hampered by the fact that American Airlines had misplaced the baggage with the equipment for the demo. The box was luckily found the following week and returned. Greg Jones, WD5IVD, presented three plaques to some of the development and beta-tester team of the TAPR/AMSAT DSP-93 that were present: Bob Stricklin, N5BRG, for outstanding contribution as principle designer and co-project manager of the TAPR/AMSAT joint DSP-93 development project. Tom McDermott, N5EG, for outstanding contributions as an alpha/beta-tester and software designer during the TAPR/AMSAT DSP-93 development project. Roy Welch, W0SL, for outstanding contributions as a beta-tester during the TAPR/AMSAT DSP-93 development project. The plaques were very striking, since they included both the face plate of the DSP-93, along with one of the beta-boards.

John Koster, W9DDD, overviewed the TAPR TNC-95 project. There was mixed response from the audience. Some thought it an old design and did not contain enough bleeding edge technology, while others were looking forward to having it made available as a kit and bare board. In any case, it will be available as the option, as planned, for the DSP-93. After John's presentation, a 30 minute break was held.

Session 2 began promptly at 10:30am with a paper on 'Modem Channel Response' by Tom McDermott, N5EG. The technical presentation overviewed the importance of selecting the overall frequency response of the modem plus channel. This was an excellent and concise technical presentation and the overheads in the proceedings are outstanding.

Phil Anderson, W0XI, then presented a paper entitled 'A Simulation of the G-TOR Hybrid ARQ Protocol.' Phil outlined what G-TOR was and how he had gone about developing the simulator. The conclusion outlined the simulation results and the expected performance of G-TOR.

Glenn Prescott, WB0SKX, concluded the series of excellent technical papers in this session with a paper on 'Considerations for Automatic Gain Control in DSP Receivers and Modems.' The paper focused on automatic gain control (AGC) in DSP technology. Needs related to the requirements of the analog-to-digital (A/D) converter were discussed using DSP techniques. An excellent technical paper.

The group broke for an hour and half lunch.

The afternoon session was conducted by Jim Neely, WA5LHS. The first presentation was by Keith Sproul, WU2Z, on 'Advances in APRS Technology.' Keith overviewed APRS, what was required, current applications, and where all this technology was going in the future.

James P. Kramper, KB0NMT, of the National Weather Service (NWS) presented a paper regarding 'The National Weather Service St. Louis, Missouri Packet Weather Wire.' James outlined how digital communications was being used to enhance the communications from the NWS to the amateur. NextRad and other types of information are being provided over packet radio now and these applications greatly enhance what the amateur weather community has for information.

Dave Wolf, WO5H, out going BBS SIG Chair, made a short presentation concerning the adopted recommendations on the BBS Hierarchical Addressing Protocol. Karl F. Larsen, K5DI, presented a short outline on an alternate packet BBS Address Proposal for future consideration.

Another thirty minute break was held and the last session of the day was held. Barry Buelow, WA0RJT, incoming BBS SIG Chair, made a short presentation on the goals of BBS SIG and outlined his future directions for the group. Gwyn Reedy, W1BEL, discussed PacComm activities. Brian Lantz, KO4KS, made a short presentation on TNOS and other related activities. BDale Garbee, N3EUA, made a presentation on the current status of RUDAK-U. Greg Jones, WD5IVD, presented a plaque to TPRS (Texas Packet Radio Society) and Robert Diersing, N5AHD, for contributions of $250 each to the RUDAK-U project fundraising.

After the short end of day presentations were concluded, two break-out groups were held. The "HF SIG / HF Digital Issues", conducted by Johan Forrer, KC7WW left the theater and met in the Social Science building. The discussion that took place is outlined in the HF SIG report. The breakout session on "Current issues in TCP/IP" was conducted by Barry McLarnon, VE3JF. The central theme of this session was implementing effective TCP/IP-based packet radio networks, and achieving a critical mass of users. Barry enumerated three key steps in achieving these objectives:

1. Build a good foundation at level 1. The rf network performance has to be good enough to show the applications in their best light. A full-duplex bit regenerating repeater at 9600 bps or more is an excellent starting point.

2. Provide lots of useful and interesting services for the TCP/IP users (but don't forget the AX.25 users - give them a taste to entice them!). Examples include DNS, POP, SMTP mail forwarding, convers, NNTP, WWW, etc. An Internet gateway can be a major factor in attracting interest.

3. Give the users lots of help in getting started, using aids such as preconfigured NOS starter kits and installation programs. Explore the various options and platforms available (JNOS, TNOS, Linux, OS/2, etc) for amateur TCP/IP experimentation. Use RIP or RSPF to make routing transparent and painless for the end users.

A lively discussion ensued, with many audience members taking part. Some examples where critical mass has been achieved (Ottawa, Seattle) were analyzed. Internet gateways and their security were a hot topic, with interesting commentaries by Bdale Garbee, N3EUA, and other gateway sysops on their experiences. Phil Karn provided an update on the status of his work with NOS, which he assured the audience he was still interested in working on. His main focus will be on making NOS run in protected mode and breaking the 640K barrier, which means getting away from the Borland C compilers.

The breakout sessions concluded around 5:30pm and people began to make the trip back to the hotel to prepare for the evening dinner and meetings. The dinner was held at 7:00pm, with a full crowd of 100 people present. The

meal was one of the best in TAPR history with lots of seconds for all those who wanted them. We will be hard pressed to repeat the quality of dinner next year. After dinner, several plaques were presented. Since this was the 10th anniversary of the TNC-II, it was fitting that many of the plaques celebrated long time volunteers and participants in TAPR from those early days. Peter Eaton, WB9FLW, for outstanding service from 1982 to 1993 as an officer, board member, and dedicated volunteer on this 10th anniversary of the TAPR TNC-II. Bill Reed, WD0ETZ, for outstanding service since 1983 as an officer, designer, tester and dedicated volunteer on this 10th anniversary of the TAPR TNC-II. Mel Whitten, K0PFX, for outstanding service since 1982 as an officer, board member, tester and dedicated volunteer on this 10th anniversary of the TAPR TNC-II. Ron Bates, AG7H, for outstanding service from 1994 to 1995 as a board member and long time contributor to the Tucson Amateur Packet Radio Corporation.

Awards that were presented to people not present included:
* Jack Davis, WA4EJR, for outstanding service from 1992 to 1995 as a board member of the Tucson Amateur Packet Radio Corporation.
* Pack-It, Inc., for outstanding service to TAPR in kit building and parts inventory from 1985 to 1995 on this 10th anniversary of the TAPR TNC-II.
* Lou Nigro, KW7H, for outstanding service to TAPR as software librarian and Internet services manager from 1991 to 1995.
* Robert Diersing, N5AHD, for outstanding service as an alpha/beta-tester and AMSAT project officer during the TAPR/AMSAT DSP-93 development project.
* Ron Parsons, W5RKN, for outstanding contributions as a beta-tester and software designer during the TAPR/AMSAT DSP-93 development project.
* Frank Perkins, WB5IPM, for outstanding contributions as an alpha/beta-tester and software designer during the TAPR/AMSAT DSP-93 development project.
* Lon Cecil, WB5PKJ, for outstanding contributions as an alpha/beta-tester and trouble shooter during the TAPR/AMSAT DSP-93 development project.
* Mark Hammond, KC4EBR, for outstanding contributions as a beta-tester and software librarian during the TAPR/AMSAT DSP-93 development project.
* Jack Davis, WA4EJR, for outstanding contributions as a beta-tester and helping with parts purchasing during the TAPR/AMSAT DSP-93 development project.

Paul Shuch, N6TX, made a high-energy and very entertaining presentation on SETI (the Search for Extra-Terrestrial Intelligence). Everyone present agreed that Paul entertained, while covering the past history and how the future search should include amateurs in an important role. If you were not there, it is highly recommended that you read his paper in the proceedings. Amateurs can play a vital role in the next ten years in the now independent search. It is simple and easy. You can contact the SETI League via the Internet at info@setileague.org. TAPR was very fortunate to have Paul make this after-dinner presentation.

After Paul had finished the prize drawing was held. AMSAT and the SETI League helped to provide additional prizes along with TAPR. Numerous small awards were given. Phil Karn, KA9Q, was drawn as the grand prize winner of a TAPR/AMSAT DSP-93. We are all looking forward to Phil getting his unit, especially with his interest in HF related DSP coding. Congratulations to Phil.
After dinner was over, the APRS SIG, BBS SIG, and PCS committee met in different locations. All three discussions will be discussed in the SIG area of the PSR.

On Sunday, two workshops were held. The early morning session was on Error Correction Techniques, by Phil Karn, KA9Q. This was an excellent presentation and everyone attending thought they easily got their money's worth. The second workshop covered the development of hardware/software for the TAPR/AMSAT DSP-93, by Bob Stricklin, N5BRG and Tom McDermott. The DSP-93 workshop was a little hampered by the above mentioned misplacing of the bag containing the workshop materials by American Airlines. Disks and Workshop materials were mailed to the attendees after the materials were returned to Bob. Luckily Bob and Tom had time Saturday evening to get with Roy Welch to set up the necessary equipment to demo and Bob had his overheads. The DSP-93 covered many of the topics required to understand how the unit worked and how to develop for it. Both workshops were video taped and will be reviewed to see if the quality is good enough to make the tape, along with workshop booklet available for each. More on this in a later PSR.

An annual meeting evalution letter will be mailed shortly to all particpants. If you attended the meeting, please take a moment when you receive this to fill it out and return it to the office. This feedback is important to the future of our annual meeting. If you have comments or suggestions on how TAPR can improve the meeting, please let the office know.

The 1995 annual meeting seems to be rated as a great success by the many who attened. If you were not able to make it, then we hope to see you in 1996. A location for the 1996 meeting has not been selected yet. Several factors are in play that need closure before a location is selected by the TAPR Board of Directors.

Again, many thanks to the MoAmPS group for all their work and effort.

TAPR - Tucson Amateur Packet Radio Corp.
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
Phone: 817-383-0000 * Fax: 817-566-2544 * Internet: TAPR@TAPR.ORG

April 1995

Original source file: tapr-bb.9504
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1995-04/TAPR-BB_1995-04.txt

1. [TAPR-BB:75] PACK*BASH Friday evening at Hamvention (fwd)

From: Greg Jones <gjones@tenet.edu>
Date: Fri, 14 Apr 1995 21:04:18 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199504150204.VAA06834@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

Sender: jra@ag9v.ampr.org
Subject: PACK*BASH Friday evening at Hamvention

Attending the 1995 Dayton Hamvention? Time's running out, so register now
for PACK*BASH!

What?
        A new event for the digitally-inclined ham, featuring:
        * Buffet dinner (with cash bar)
        * Nationally-known speaker holding forth on a current topic
        * Prize raffle
        * TAPR special interest group meetings
        * "Birds of a Feather" gatherings

When?
        Friday evening, April 28, 1995
        Dinner starts at 7:00 pm
        Speaker at 7:45
        Meetings to begin after the speaker

Where?
        TJ's Restaurant
        2462 Dryden Road, Dayton
        (Dryden Road exit, I75 -- across from the Holiday Inn)

How?
        Dinner requires advance registration and payment BY APRIL 24th, 1995.
        Seating for dinner only is limited, so register early! The cost is
        $16.00 per person, tax and tip included.

        All amateurs are welcomed to attend, enjoy the speaker, and
        particpate in the meetings, although only those purcashing a dinner
        can eat.

        To register, contact:
        PACK*BASH
        c/o TAPR
        8987-309 E. Tanque Verde Road #337
        Tucson, AZ   85749-9399

        Phone: (817) 383-0000
        Fax: (817) 566-2544
        Internet: TAPR@TAPR.ORG

        Visa/Mastercard Accepted

Who?
        PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet Radio,
        the national leader in digital communication -- and the Miami
        Valley FM Association, Dayton's packet radio club.

For further information, contact TAPR, or email packbash@ag9v.ampr.org or
BASH@N8ACV.#DAY.OH.USA.NOAM
--
John Ackermann   AG9V
Internet: jra@ag9v.ampr.org
Packet: AG9V@N8ACV.#DAY.OH.USA

2. [TAPR-BB:77] BBSSIG meeting at Dayton (fwd)

From: Greg Jones <gjones@tenet.edu>
Date: Fri, 21 Apr 1995 21:47:34 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199504220247.VAA29991@Joyce-Perkins.tenet.edu>

Rendered body type: text/plain

Sender: Barry Buelow WA0RJT <barry@ia.net>
Subject: BBSSIG meeting at Dayton

The TAPR BBSSIG will meet in Dayton, Ohio in conjunction with the
Hamvention.

When: Saturday evening April 29, beginning at 7:00pm

Where: Radison Hotel - Premier Room
        The Radison is located near the intersection of I-75 and
        Needmore Rd. This is not far from Hara Arena.
        Parking can be a problem, so try to car pool.
        New feature this year - CHAIRS !!!

This is a great opportunity to meet with fellow BBS Sysops and discuss
current events and plans for the future. TAPR membership is not a
requirement, this event is open to the public.

For more information, stop by the TAPR booth at HARA.

--

Barry Buelow   WA0RJT   Packet BBS in Cedar Rapids, IA
barry@ia.net   wa0rjt@wa0rjt.ia.usa.noam

3. TAPR @ Dayton '95

From: Greg Jones <gjones@tenet.edu>
Date: Sat, 22 Apr 1995 16:28:46 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199504222128.QAA08056@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

TAPR Activities at Dayton '95

Dayton is almost upon us and here is the list of TAPR activities and events
happening during Dayton. We hope to see lots of folks around and please
stop by the TAPR booth and say hi!

TAPR Booth

The booth is located at the same location as the last several years. We
should have most items and kits available and another big membership offer
will be available to new members! Come by and say hi to the TAPR gang and
if you want, help out behind the table. The more the merrier.

Regional Groups Note: If you are with a regional digital group, please stop
by and chat with Greg Jones, WD5IVD about how TAPR can do things with your
regional group. There will also be a place at the booth to place regional
materials, so if you have something to hand out, drop it off.

Friday - TAPR Digital Forum

1:00pm - 1:45pm   Introduction to Digital Communications
                      Greg Jones, WD5IVD
1:45pm - 2:00pm   TAPR Update
                      John Ackerman, AG9V
2:00pm - 2:30pm   Layer 1 and Radio Issues
                      Mel Whitten, K0PFX
2:30pm - 3:00pm   TAPR/AMSAT DSP-93 Project Update
                      Bill Reed, WD0ETZ
3:00pm - 3:30pm   TCP/IP Issues and Trends
                      Barry McLaren, VE3JF
3:30pm - 3:45pm   BBS Issues and Trends
                      Barry Buelow, WA0RJT
3:45pm - 4:00pm   HF Digital Communications Trends

4:00pm - 4:30pm   APRS
                      Bob Bruninga, WB4APR
4:30pm - 5:30pm   TAPR APRS SIG
                      Keith Sproul, WU2Z

PACK*BASH T95 - Friday Evening

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A new event for the digitally-inclined ham, featuring:
  *  Buffet dinner (with cash bar)
  *  Nationally-known speakers holding forth on current topics:
       * Bob Bruninga, WB4APR (Author of APRS)
       * Dewayne Hendricks, WA8DZP
  *  Prize raffle
  *  Lots of Informal Discussion
  *  TAPR NET SIG and a second APRS SIG meeting

When?
  Friday evening, April 28, 1995
  Dinner starts at 7:00 PM, speaker at 7:45 PM
  Everyone is invited to attend, but dinner is only available to those
  with reservations.

Where?
  TJ's Restaurant, 2462 Dryden Road, Dayton
  (Dryden Road exit, I75 -- across from the Holiday Inn)
  (Maps available at the TAPR booth)

How?
  Dinner requires advance registration (by April 24th)
  Come by the TAPR booth at Dayton to check on additional space.
  Everyone is invited to come, but dinner is only available to those
  with reservations.
  Dinner cost is $16.00 per person, tax and tip included.

  To register, contact:
    TAPR (tapr@tapr.org)
    Phone: (817) 383-0000, Fax: (817) 566-2544

Who?
  PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet Radio,
  the national leader in digital communication -- and the Miami
  Valley FM Association, Dayton's packet radio club.

(This is a replacement of the McNasty's event)


Saturday - BBS SIG Meeting
--------------------------
The TAPR BBS SIG will meet Saturday night at 7:00pm

Where:  Radison Hotel - Premier Room
        The Radison is located near the intersection of I-75 and
        Needmore Rd.  This is not far from Hara Arena.

        New feature this year - CHAIRS !!!

This is a great opportunity to meet with fellow BBS Sysops and discuss
current events and plans for the future.  TAPR membership is not a
requirement, this event is open to the public.

For more information, stop by the TAPR booth at HARA.


------------------------------------------------------------------------
Tucson Amateur Packet Radio (tapr@tapr.org)
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
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May 1995

Original source file: tapr-bb.9505
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1995-05/TAPR-BB_1995-05.txt

1. [TAPR-BB:80] Problems with TAPR FTP via web pages? (fwd)

From: Greg Jones <gjones@tenet.edu>
Date: Tue, 2 May 1995 10:10:25 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199505021510.KAA02381@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

Sender: Howard Goldstein <hg@penny.n2wx.ampr.org>
Subject: Problems with TAPR FTP via web pages?

Been brought to my attention that some folks are having trouble webbing into TAPR's ftp site from the link on the web page.

If you know of this problem, or better yet, if you have this problem, please email me and be sure to mention the browser used and the error received.

Thanks

Howie

--
Howard Goldstein hg@n2wx.ampr.org
N2WX http://www.tapr.org/~n2wx/

2. [TAPR-BB:83] Cheap Flights (fwd)

From: Greg Jones <gjones@tenet.edu>
Date: Fri, 5 May 1995 09:23:34 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199505051423.JAA20616@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

Sender: dwolf@tcet.unt.edu (Dave Wolf)
Subject: Cheap Flights

If you are planning on attending the Digital Communications Conference in September, the time to book your air travel is NOW. The summer fare war is on and the prices are right. The current crop of pricing is good for travel thru Sept 15, so the timing is perfect for the DCC.

Book those flights now and we hope to see you at the DCC Sept 8-10 in Arlington, Texas. The ARRL Digital Communications Conference is co-sponsored by TAPR and the Texas Packet Radio Society.

73 de Dave WO5H

3. HF Digital Communications in the Amateur Service

From: Greg Jones <gjones@tenet.edu>
Date: Mon, 22 May 1995 13:28:48 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199505221828.NAA24478@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

In the Matter of	)	PR Docket No. 94-59
	)	
Amendment of Part 97 of the	)	RM-8218
Commission's Rules Concerning	)	RM-8280
HF Digital Communications in the	)	
Amateur Service.	)	

REPORT AND ORDER

Adopted: April 17, 1995 Released: April 27, 1995

By the Commission:

I. INTRODUCTION

1. On June 13, 1994, we adopted a Notice of Proposed Rule Making (Notice) in the above-captioned proceeding. In the Notice, we proposed to authorize automatic control of stations transmitting digital emission types on the High Frequency (HF) amateur service bands, subject to two conditions for such operation. The automatically controlled station must either be connected to another station that is under manual control, or the automatically controlled station must transmit within a subband designated for this purpose. In this Report and Order, we adopt the proposed rules.

II. DISCUSSION

2. In response to the Notice, we received nineteen comments and one reply comment. The comments ranged from recommending that automatic control not be authorized under any condition to recommending that automatic control be authorized unconditionally. They confirmed generally that the amateur service has a need for stations to transmit digital emission types on the HF bands while under automatic control. The comments also established that there is concern that such transmissions could cause interference to other communications. The comments, however, generally agree that the conditions proposed will provide the necessary degree of protection against such interference. They indicated, moreover, that the desired communications can be carried out under the conditions proposed.

3. Except for temporary authority we issued to permit a feasibility study directed by The American Radio Relay League, Inc. (ARRL), automatic control has not been authorized on the HF bands. Heretofore we have considered immediate action by the station control operator as necessary to avoid causing interference to the communications of other amateur stations transmitting on an HF band. A station transmitting on an HF band usually demands greater attention by its control operator than does a station transmitting on Very-High Frequency (VHF) and higher frequency bands because HF radio wave propagation is long range and changes often. The comments, however, indicated that such operation is practical on the HF bands when the automatically controlled station is simply responding to interrogation by a station having the control operator at its control point or when the station is transmitting on a channel located within a small subband designated for that purpose.

4. The ARRL supports the proposal. It states that absent consensus in the comments, we should take the compromise approach reflected in the rules as proposed. It contends that authorization of automatic control will result in greater flexibility in experimentation and development of digital communications as well as facilitate adaption of existing digital technologies to practical use. In another comment that strongly supported automatic control, however, Colby states that establishing and maintaining communications on a shared HF channel is no different than it is on a shared VHF channel, and opposes any conditions on automatically controlled amateur stations beyond those now required in the VHF bands. The ARRL argues that additional conditions proposed are necessary because any automatically controlled station transmitting in a crowded shared HF band involves a substantially increased risk of interference. Other comments also express concern with an increased risk of interference. Further, they oppose the establishment of subbands as a solution to the interference concern because subbands would significantly reduce the available spectrum for stations transmitting other emission types.

5. Automatic control of stations transmitting digital emission types enables amateur operators to utilize high-speed computer-based message technology for the rapid and accurate relaying of messages and data. For this reason, we conclude that there has been demonstrated a need for stations in the amateur

service to transmit on the HF bands under automatic control. Such operation will result in greater flexibility in experimentation and development of digital communications.

6. We do recognize the concerns of those who oppose the proposal on the basis of potential interference, and in response to these concerns we are limiting when automatic control can be employed. First, the control operator of the station that is connected to the automatically controlled station must prevent the automatically controlled station from causing interference. Second, we are designating subbands to which transmissions between two automatically controlled stations are confined. These subbands are a small portion of the spectrum otherwise available for digital emission types. We also are confident in the ability of the amateur service community to respond, as it has in the past, to the challenge of minimizing interference with novel technical and operational approaches to the use of shared frequency bands.

7. Requiring automatically controlled stations to transmit only in the designated subbands when communicating with another automatically controlled station, furthermore, will not reduce the HF spectrum available for other emission types. The bandwidth of the transmissions of an automatically controlled station will occupy no more than 500 Hz, and the subbands represent only 3.8 percent of the HF spectrum authorized to the amateur service. Other than Morse telegraphy, only digital emission types are currently authorized for the specified subbands. Nothing in the rules that we are adopting prohibits other stations from continuing to share these subbands.

III. CONCLUSION

8. In summary, we are amending the amateur service rules to authorize automatic control of amateur stations. To lessen the possibility of inadvertent interference, the automatically controlled station either must be connected to another station that is under manual control, or the automatically controlled station must transmit only within a subband designated for communications between automatically controlled stations. We believe these rule changes will allow the amateur service community to contribute to communication technology and to advance its communication and technical skills consistent with Section 97.1 of the Commission's Rules, 47 C.F.R. 97.1. We see this action as fundamental to our commitment to provide maximum flexibility to the amateur service community. Therefore, we will amend the amateur service rules as set forth in the attached Appendix.

IV. ORDERING CLAUSES

9. Accordingly, IT IS ORDERED that effective July 1, 1995, Part 97 of the Commission's Rules, 47 C.F.R. Part 97, IS AMENDED as set forth in the Appendix hereto. Authority for this action is found in Section 4(i) and 303(r)of the Communications Act of 1934, as amended, 47 U.S.C. 154(i) and 303(r).

10. IT IS FURTHER ORDERED that this proceeding IS TERMINATED.

11. For further information, contact William T. Cross of the Wireless Telecommunications Bureau, Private Wireless Division, (202) 418-0680.

FEDERAL COMMUNICATIONS COMMISSION

William F. Caton
Acting Secretary

APPENDIX

Part 97 of Chapter I of Title 47 of the Code of Federal Regulations is amended as follows:

Part 97 - Amateur Radio Service

1. The authority citation for Part 97 continues to read as follows:

Authority citation: 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303. Interpret or apply 48 Stat. 1064-1068, 1081-1105, as amended; 47 U.S.C. 151-155, 301-609, unless otherwise noted.

2. Section 97.109 is amended by revising paragraphs (d) and (e) to read as follows:

97.109 Station control.

* * * * *

(d) When a station is being automatically controlled, the control operator need not be at the control point. Only stations specifically designated elsewhere in this Part may be automatically controlled. Automatic control must cease upon notification by an EIC that the station is transmitting improperly or causing harmful interference to other stations. Automatic control must not be resumed without prior approval of the EIC.

(e) No station may be automatically controlled while transmitting third party communications, except a station transmitting a RTTY or data emission. All messages that are retransmitted must originate at a station that is being locally or remotely controlled.

3. A new Section 97.221 is added to Subpart C To read as follows:

97.221 Automatically controlled digital station.

(a) This rule section does not apply to an auxiliary station, a beacon station, a repeater station, an earth station, a space station, or a space telecommand station.

(b) A station may be automatically controlled while transmitting a RTTY or data emission on the 6 m or shorter wavelength bands, and on the 28.120-28.189 MHz, 24.925-24.930 MHz, 21.090-21.100 MHz, 18.105-18.110 MHz, 14.0950-14.0995 MHz, 14.1005-14.112 MHz, 10.140-10.150 MHz, 7.100-7.105 MHz, or 3.620-3.635 MHz segments.

(c) A station may be automatically controlled while transmitting a RTTY or data emission on any other frequency authorized for such emission types provided that:

(1) The station is responding to interrogation by a station under local or remote control; and

(2) No transmission from the automatically controlled station occupies a bandwidth of more than 500 Hz.

4. Press Release DCC 1995

From: Greg Jones <gjones@tenet.edu>
Date: Tue, 23 May 1995 12:26:40 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199505231726.MAA12775@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

Press Release: June 1, 1995

1995 ARRL Digital Communications Conference
September 8-10th, 1995
Arlington, Texas (minutes from DFW airport)

Permission is granted to reprint any or all parts of this press release.

Full text is available on the Internet:
FTP: ftp.tapr.org WWW: hhtp://www.tapr.org/tapr E-Mail: tapr@tapr.org
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It's that time again! Time to make your travel plans and put the finishing touches on your work for the upcoming 14th Annual ARRL Digital Communications Conference.

The ARRL Digital Communications Conference is an international forum for radio amateurs in digital communications, networking, and related technologies to meet, publish their work, and present new ideas and techniques for discussion. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. The Digital Communications Conference is not just for the digital elite, but for digitally-orientated amateurs of all levels of experience.

The 1995 Digital Communications Conference will be held on September 8-10th, 1995 in Arlington, Texas. Arlington is just minutes away from the Dallas/Ft. Worth International Airport, which is located in the middle of the country, and airfares have never been cheaper for this conveniently-located conference.

Not only is the Digital Communications Conference technically stimulating, it is a weekend of fun for all who have more than a casual interest in any of the ham digital communications modes. This includes BBS operators, networkers, DX-Cluster Sysops, software writers, modem designers, and digital satellite communications enthusiasts. The Digital Communications Conference is for all levels of digital operators -- a must conference to attend to get active on a national level. Now, more than ever, amateur radio needs this great meeting of the minds, since it is important that we demonstrate a continued need for the rich frequency allocations we now have by pushing forward and documenting our achievements. The ARRL Digital Communications Conference is one of the few ways to record our accomplishments and challenge each other to do more.

What can you expect during the 14th annual Digital Communications Conference ?

* A full day of papers and breakouts on Saturday for the beginner to the advanced amateur digital enthusiast.

* Two workshops, one on APRS on Friday and one on making use of the new PCS (Personal Communications Service) technology on Sunday.

* A Texas-sized banquet with a Special Guest Speaker.

* SIGs (Special Interest Groups) on Saturday following the banquet.

* Informal get-togethers throughout the weekend.

* A meeting facility that is perfect for this type of meeting.

* Vendor area and informal engineering discussions.

* Scores of nearby restaurants and entertainment (Six Flags Over Texas, The Ballpark at Arlington, Wet 'n Wild, golf).

* An event at which the most important new developments in amateur digital communications are announced.

* Digital 'movers and shakers' from all over the world in attendance.

* Plenty of Texas hospitality!

In addition to the presentation of papers on Saturday, two workshops will be held during the conference. On Friday, Keith Sproul, WU2Z, will hold a workshop on APRS packet-location software. Keith is the Chair of the TAPR APRS Special Interest Group, developer of the Macintosh version of APRS, and a leader in the area of APRS technology. This is a unique opportunity to gain insight into this fast growing new digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning Satellites). On Sunday, Dewayne Hendricks, WD8DZP, will conduct a workshop focusing on a survey of Personal Communications Systems and their applications and use in the Amateur Radio Service. Dewayne is an expert in the area of commercial wireless systems; his company WarpSpeed Imagineering, focuses on wireless Internet. This workshop presents an opportunity to learn how Personal Communications Technology (handheld and small business wireless systems) can be used in the amateur service.

The 1995 Digital Communications Conference is co-hosted by Tucson Amateur Packet Radio (TAPR) and the Texas Packet Radio Society (TPRS). TAPR

has been active as an international amateur research and development organization since 1981 and was responsible for development of the TNC-2 and other amateur kits and publications. TAPR currently has more than 2500 members, worldwide. TAPR continues to provide leadership in digital amateur radio activities by supporting Special Interest Groups, conferences/meetings, publications, and research and development projects. TPRS has been active as an organization since 1984 and has been responsible for the development of the TexNet network in Texas, Oklahoma, Arkansas, and Missouri. TPRS membership now tops 500 members.

Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the Conference is not required for publication. If you know of someone who is doing great things with digital communications, be sure to personally tell them about this! Papers are due by July 21, 1995, and should be submitted to Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111 or via the Internet to mweinberg@arrl.org. Please contact Maty for detailed format requirements.

If you have attended a Digital Communications Conference in the past, just remember back to how much fun it was discussing the latest developments into the wee hours! If you have never been, then make your plans now to attend and find out how much fun the Digital Communications Conference can be.

There are few activities where the importance of your participation can be so much fun and important! What a great way to share and renew your enthusiasm for digital amateur radio! Getting together with colleagues from all over the world and bringing each other up to date on your latest work. All this, and more, for an unforgettable weekend of ham radio and digital communications. Make your travel and lodging arrangements now. We hope to see you at the ARRL Digital Communications Conference on September 8-10!

Full information on the conference and hotel information can be obtained by contacting Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road, Tucson, AZ 85749-9399. Phone: (817) 383-0000. Fax: (817) 566-2544. Internet: TAPR@TAPR.ORG

Sincerely,
Greg Jones, WD5IVD Q President, Tucson Amateur Packet Radio
Dave Wolf, WO5H Q President, Texas Packet Radio Society

Note: If you need handouts or flyers for meetings, contact TAPR about getting what you need!

Hotel Information

Conference presentations, meetings, and workshops, will be held at the La Quinta Inn and Conference Center, 825 N Watson Road, Arlington, Tx, (800) 531-5900, (817) 640-4142, Fax (817) 649-7864, intersection of I-30 and Texas 360. Rooms rates are $53/single, $58/double, $63/triple, and $85+ for suites. When making reservations with the hotel, be sure to indicate you are attending the conference. Six Flags (larger than Disney Land), the Texas Rangers, and several other attractions are within a few miles of the hotel. If you are planning to stay at the hotel, it is highly recommended that you book your room prior to August 25th, 1995 -- a block of 100 rooms is reserved for Friday and Saturday. The hotel provides transportation to and from D/FW International Airport. You should contact the hotel to arrange airport transportation.

Registration

Contact the TAPR office by Phone, Fax, or e-mail (Internet: tapr@tapr.org) to pre-register or for additional meeting information. MasterCard and VISA accepted.

Digital Communications Conference
==========

- Pre-Registration (before August 21st) $30.00 *

- Late Registration or at door $35.00 *

    * - Conference Registration includes:
        Conference Proceedings, Sessions, Meetings, and Lunch.

- Saturday Evening Dinner $17.00 **

    ** - Dinner, Speaker, Prize Drawing (Limited Space)

Workshops
=========
APRS Workshop, Friday, 4pm - 7pm. Conducted by Keith Sproul, WU2Z

- Pre-Registration (before August 21st) $10.00

- Late Registration or at door $15.00

PCS Workshop, Sunday, 9:00am - 1:00pm. Dewayne Hendricks, WA8DZP
Survey of Personal Communications Systems (PCS) Technologies and their
application and use in the Amateur Radio Service

- Pre-Registration (before August 21st) $10.00

- Late Registration or at door $15.00

Contact TAPR to register for the DCC.
Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road, Tucson, AZ
85749-9399. Phone: (817) 383-0000. Fax: (817) 566-2544.
Internet: TAPR@TAPR.ORG

5. '95 DCC Proceedings Deadline

From: Greg Jones <gjones@tenet.edu>
Date: Fri, 26 May 1995 23:59:41 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing), bbssig@tapr.org (BBS SIG mailing),
netsig@tapr.org (NETSIG mailing), aprssig@tapr.org (APRS SIG),
dsp-93@tapr.org (DSP-93 Build)
Message-ID: <199505270459.XAA24090@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

1995 ARRL Digital Communications Conference
Proceedings Deadline Information

Anyone interested in digital communications is invited to submit a paper for
publication in the 1995 Conference Proceedings. Presentation at the
Conference is not required for publication. If you know of someone who is
doing great things with digital communications, be sure to personally tell
them about this! Papers are due by July 21, 1995, and should be submitted
to Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111 or via the
Internet to mweinberg@arrl.org. Please contact Maty for detailed format
requirements.

Deadline: July 21, 1995 (Friday)

Start writing those papers now!
This is your opportunity to let others know what you have been doing.

6. PSR Issues #58 and #59

From: Greg Jones <gjones@tenet.edu>
Date: Wed, 31 May 1995 18:03:50 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199505312303.SAA24250@Alice-Thurman.tenet.edu>
Rendered body type: text/plain

PSR Issue #58 is hitting the mail this week!

Sorry for the delay, but the PSR editor had surgery last month, which pushed
everything a little back. We are all happy that Bob is recovering fully.

Deadline for article submission for issue #59 is June 15th, 1995.

If you have an article in mind, you can contact Bob at:
Internet: psr@tapr.org
CIS:J71121,1007
Mail: POB 1902, Elmira, NY 14902-1902

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
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e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: http://www.tapr.org/tapr
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June 1995

Original source file: tapr-bb.9506
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1995-06/TAPR-BB_1995-06.txt

1. [TAPR-BB:92] Apple NII Band petition to FCC (fwd)

From: Greg Jones <gjones@tenet.edu>
Date: Fri, 16 Jun 1995 01:44:41 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199506160644.BAA09641@Leslie-Francis.tenet.edu>
Rendered body type: text/plain

Sender: dewayne@warpspeed.com (Dewayne Hendricks)
Subject: Apple NII Band petition to FCC

TAPR Mailing Lists:

On May 24th, Apple Computer filed a petition for rulemaking with the FCC for a new unlicensed wireless data service called the NII Band. This action should be of interest to the amateurs as part of the spectrum that Apple requests for this band is currently allocated to the amateur radio service.

A short summary of the Apple petition follows:

Apple in their petition calls for the creation of a new band of frequencies for high capacity, unlicensed wireless data, the "NII Band". Specifically, Apple proposes that the Commission allocate 300 MHz of spectrum in the 5 GHz range, comprised of the 5150-5300 MHz band (which has been allocated throughout most of Europe for "HIPERLAN" unlicensed wireless local area networks) and the 5725-5875 MHz band (which currently is used by unlicensed Part 15 technologies; industrial, scientific and medical ("ISM") devices; and Amateur operators).

The essential characteristics of the NII Band are:

o Adequate bandwidth to support high-speed applications (up to 24 Mbps or more) and large numbers of users;

o "Part 16" operation in protected spectrum and in conformance with an overarching set of technical rules, developed by the information industry;

o Equal access to the spectrum for all compliant devices and all types of communications; and

o Longer distance communications (10-15 km or more), creating new possibilities for unlicensed community networks.

In case you haven't been keeping up on current events, the amateur service allocation in this area of spectrum is 5650-5925 MHz. So it would appear that there is a conflict with this proposed new service and the amateur radio service spectrum allocation.
The FCC has assigned this petition RM-8653. Comments are due on July 10th and reply comments are due by July 25th. If you are interested in reading the full text of this petition, and you have WWW access, you can find in on my website:

URL: http://www.warpspeed.com/

If you don't, I will also be putting it up for anonymous ftp access by Sunday 6/18 at ftp.warpspeed.com. There is not much time left for getting comments into the FCC on this issue, so if you have any opinions one way or another, you should get moving.

-- Dewayne

Dewayne Hendricks, WA8DZP ! CIS: 75210,10 AppleLink: D6547
Warp Speed Imagineering ! Internet: dewayne@warpspeed.com
43730 Vista Del Mar ! Packet Radio: WA8DZP @ K3MC.#NOCAL.CA.USA.NOAM
Fremont, CA 94539-3204 ! AOL: HENDRICKS
Fax: (510) 770-9854 ! WWW: http://www.warpspeed.com/
---

2. Introducing the TAPR-TNC SIG

From: Greg Jones <gjones@tenet.edu>
Date: Wed, 21 Jun 1995 01:01:16 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199506210601.BAA11764@Leslie-Francis.tenet.edu>
Rendered body type: text/plain

```
Introducing the TAPR-TNC SIG
----------------------------

To subscribe:
send e-mail to: listproc@tapr.org
with a blank subject.  In the body of your message, write

     SUBSCRIBE TAPR-TNC FIRST_NAME LAST_NAME


This SIG is intended to be a low volume, high s/n place to discuss issues
related to use of the TAPR (and clone) TNCs.  It is not moderated at this
time; list subscribers are requested to remain on topic and use discretion
to help keep up the s/n ratio.

The following subjects with respect to TNC-1 and TNC-2 are "on topic":

 o - Hardware bugs, problems, mods
 o - Firmware bugs, problems, patches
 o - TAPR documentation
 o - Interface issues
 o - Announcements of the above
 o - Suggestions for enhancements
 o - and anything else reasonably resembling the above

Although packet radio novices are invited to join, this is probably the
wrong place to post new user questions.  More rapid and complete replies to
new user questions is more likely to be found in one of the many newsgroups
in the rec.radio.amateur.* hierarchy.

This is also the wrong place to debate the merits of various manufacturer's
offerings or to elicit suggestions about "Which TNC should I purchase?"
Please try the newsgroups.

At times, you may find your post is relevant to one of the other fine TAPR
SIGs as well as this one.  Initial crossposting is not necessarily a bad
idea.  Use your judgment.

Spirited, lively discussion is invited but flames will be promptly
extinguished.  The moderator reserves the right to deal with flames and
off-topic posts from a stance somewhere between complete arbitrariness and
Solomonesque.  Hopefully more of the latter than the former.

73 Howie N2WX
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July 1995

Original source file: tapr-bb.9507
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1995-07/TAPR-BB_1995-07.txt

1. 95 Digital Communication Conference

From: Greg Jones <gjones@tenet.edu>
Date: Mon, 3 Jul 1995 03:06:29 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199507030806.DAA27764@Leslie-Francis.tenet.edu>
Rendered body type: text/plain

Press Release: June 1, 1995
1995 ARRL Digital Communications Conference
September 8-10th, 1995
Arlington, Texas (minutes from DFW airport)

Permission is granted to reprint any or all parts of this press release.

Full text is available on the Internet:
FTP: ftp.tapr.org WWW: hhtp://www.tapr.org/tapr E-Mail: tapr@tapr.org
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It's that time again! Time to make your travel plans and put the finishing touches on your work for the upcoming 14th Annual ARRL Digital Communications Conference.

The ARRL Digital Communications Conference is an international forum for radio amateurs in digital communications, networking, and related technologies to meet, publish their work, and present new ideas and techniques for discussion. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. The Digital Communications Conference is not just for the digital elite, but for digitally-orientated amateurs of all levels of experience.

The 1995 Digital Communications Conference will be held on September 8-10th, 1995 in Arlington, Texas. Arlington is just minutes away from the Dallas/Ft. Worth International Airport, which is located in the middle of the country, and airfares have never been cheaper for this conveniently-located conference.

Not only is the Digital Communications Conference technically stimulating, it is a weekend of fun for all who have more than a casual interest in any of the ham digital communications modes. This includes BBS operators, networkers, DX-Cluster Sysops, software writers, modem designers, and digital satellite communications enthusiasts. The Digital Communications Conference is for all levels of digital operators -- a must conference to attend to get active on a national level. Now, more than ever, amateur radio needs this great meeting of the minds, since it is important that we demonstrate a continued need for the rich frequency allocations we now have by pushing forward and documenting our achievements. The ARRL Digital Communications Conference is one of the few ways to record our accomplishments and challenge each other to do more.

What can you expect during the 14th annual Digital Communications Conference ?

* A full day of papers and breakouts on Saturday for the beginner to the advanced amateur digital enthusiast.
* Two workshops, one on APRS on Friday and one on making use of the new PCS (Personal Communications Service) technology on Sunday.
* A Texas-sized banquet with a Special Guest Speaker.
* SIGs (Special Interest Groups) on Saturday following the banquet.
* Informal get-togethers throughout the weekend.
* A meeting facility that is perfect for this type of meeting.
* Vendor area and informal engineering discussions.

* Scores of nearby restaurants and entertainment
  (Six Flags Over Texas, The Ballpark at Arlington, Wet 'n Wild, golf).

* An event at which the most important new developments in amateur digital communications are announced.

* Digital 'movers and shakers' from all over the world in attendance.

* Plenty of Texas hospitality!

In addition to the presentation of papers on Saturday, two workshops will be held during the conference. On Friday, Keith Sproul, WU2Z, will hold a workshop on APRS packet-location software. Keith is the Chair of the TAPR APRS Special Interest Group, developer of the Macintosh version of APRS, and a leader in the area of APRS technology. This is a unique opportunity to gain insight into this fast growing new digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning Satellites). On Sunday, Dewayne Hendricks, WD8DZP, will conduct a workshop focusing on a survey of Personal Communications Systems and their applications and use in the Amateur Radio Service. Dewayne is an expert in the area of commercial wireless systems; his company WarpSpeed Imagineering, focuses on wireless Internet. This workshop presents an opportunity to learn how Personal Communications Technology (handheld and small business wireless systems) can be used in the amateur service.

The 1995 Digital Communications Conference is co-hosted by Tucson Amateur Packet Radio (TAPR) and the Texas Packet Radio Society (TPRS). TAPR has been active as an international amateur research and development organization since 1981 and was responsible for development of the TNC-2 and other amateur kits and publications. TAPR currently has more than 2500 members, worldwide. TAPR continues to provide leadership in digital amateur radio activities by supporting Special Interest Groups, conferences/meetings, publications, and research and development projects. TPRS has been active as an organization since 1984 and has been responsible for the development of the TexNet network in Texas, Oklahoma, Arkansas, and Missouri. TPRS membership now tops 500 members.

Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the Conference is not required for publication. If you know of someone who is doing great things with digital communications, be sure to personally tell them about this! Papers are due by July 21, 1995, and should be submitted to Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111 or via the Internet to mweinberg@arrl.org. Please contact Maty for detailed format requirements.

If you have attended a Digital Communications Conference in the past, just remember back to how much fun it was discussing the latest developments into the wee hours! If you have never been, then make your plans now to attend and find out how much fun the Digital Communications Conference can be.

There are few activities where the importance of your participation can be so much fun and important! What a great way to share and renew your enthusiasm for digital amateur radio! Getting together with colleagues from all over the world and bringing each other up to date on your latest work. All this, and more, for an unforgettable weekend of ham radio and digital communications. Make your travel and lodging arrangements now. We hope to see you at the ARRL Digital Communications Conference on September 8-10!

Full information on the conference and hotel information can be obtained by contacting Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road, Tucson, AZ 85749-9399. Phone: (817) 383-0000. Fax: (817) 566-2544. Internet: TAPR@TAPR.ORG

Sincerely,
Greg Jones, WD5IVD Q President, Tucson Amateur Packet Radio
Dave Wolf, WO5H Q President, Texas Packet Radio Society

Note: If you need handouts or flyers for meetings, contact TAPR about getting what you need!

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Hotel Information

        Conference presentations, meetings, and workshops, will be held at the
La Quinta Inn and Conference Center, 825 N Watson Road, Arlington, Tx, (800)
531-5900, (817) 640-4142, Fax (817) 649-7864, intersection of I-30 and Texas
360.  Rooms rates are $53/single, $58/double, $63/triple, and $85+ for
suites.  When making reservations with the hotel, be sure to indicate you
are attending the conference.  Six Flags (larger than Disney Land), the
Texas Rangers, and several other attractions are within a few miles of the
hotel.  If you are planning to stay at the hotel, it is highly recommended
that you book your room prior to August 25th, 1995 -- a block of 100 rooms
is reserved for Friday and Saturday.  The hotel provides transportation to
and from D/FW International Airport.  You should contact the hotel to
arrange airport transportation.


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Registration

        Contact the TAPR office by Phone, Fax, or e-mail (Internet: tapr@tapr.org)
to pre-register or for additional meeting information.  MasterCard and VISA
accepted.

Digital Communications Conference
=================================
  - Pre-Registration (before August 21st)             $30.00 *

  - Late Registration or at door                      $35.00 *

       * - Conference Registration includes:
           Conference Proceedings, Sessions, Meetings, and Lunch.

  - Saturday Evening Dinner                           $17.00 **

       ** - Dinner, Speaker, Prize Drawing  (Limited Space)


Workshops
=========
APRS Workshop, Friday, 4pm - 7pm.  Conducted by Keith Sproul, WU2Z

  - Pre-Registration (before August 21st)             $10.00

  - Late Registration or at door                      $15.00


PCS Workshop, Sunday, 9:00am - 1:00pm.  Dewayne Hendricks, WA8DZP
Survey of Personal Communications Systems (PCS) Technologies and their
application and use in the Amateur Radio Service

  - Pre-Registration (before August 21st)             $10.00

  - Late Registration or at door                      $15.00

Contact TAPR to register for the DCC.
Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road, Tucson, AZ
85749-9399.  Phone: (817) 383-0000.  Fax: (817) 566-2544.
Internet: TAPR@TAPR.ORG
```

2. DSP-93 Update

```
From: Greg Jones <gjones@tenet.edu>
Date: Wed, 5 Jul 1995 23:57:28 -0500 (CDT)
To: dsp-93@tapr.org (DSP-93 Build), tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199507060457.XAA15858@Leslie-Francis.tenet.edu>
Rendered body type: text/plain

TAPR/AMSAT DSP-93 Update                                    July 5th, 1995
================================================================================

140 units are currently shipping out of 180 units that were kitted.  Thus,
40 DSP-93 units are available for shipping now!  Only a short wait while the
orders before new ones are shipped.

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```

Check out the TAPR/AMSAT DSP-93 Web Page. http://www.tapr.org/tapr

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New Items:

* New 2.17 EPROM Set
        Images are available on ftp://ftp.tapr.org/tapr/dsp93/eproms
        Images have also been uploaded on many of the satellites
        EPROM sets can be purchased from the TAPR office for $15.00
           plus $2.00 s/h within the US.

* New DSP-93 Operations Guide (see below)
* New DSP-93 Developers Guide (see below)
       Documents are available on ftp://ftp.tapr.org/tapr/dsp93/manuals
           and http://www.tapr.org/tapr
       A set of the new guides can be purchased from the TAPR office for
           $5.00 plus $2.00 s/h within the US.

==========

* DSP-93 Operations Guide (contents)

Introduction
Loading the DSP-93 Software
        Connecting the DSP-93 to your computer
        Monitor Test
        Loading Files from the Monitor
        Loading files from the D93WE.EXE
        Loading Files from DOS
        Loading files from a Macintosh Computer
        Loading files using WiSP
How to connect the DSP-93 to a TNC
RADIO IO Port Configuration Setup
EPROM Version 2.15, 2.16 and later
Example IO Port Configuration Setup
How to connect the DSP-93 to Radios
Transmitter and Receiver Interfacing
Modifying your radios for 9600 bps
Connecting your radios
Modem Documentation
        FSK modems
        PKT modems
How to connect the DSP-93 to your Radio
IC-275/IC-475
IC-970
KENWOOD TS-790A
YAESU FT-736R

Contributions by Syd Horne VE3EGO, Roy Welch, W0SL, Ron Parsons, W5RKN, Mark
Hammond, KC4EBR and Howard Sodja, W6SHP. Edited by Ron Parsons, W5RKN

==========

* DSP-93 Developers Guide (contents)

Introduction and Overview
Books to Read
Theory of Operation of DSP-93
        DSP-93 Design
        Code Development
        Memory Map
        Memory Mapping
        Internal memory (TMS320C25)
        External memory
The DSP-93 Monitor
        DSP-93 Firmware - Monitor Operation
        Sine/Cosine table
The Parts of a DSP-93 Program
        Header (Instructions, Copyrights, Disclaimers, etc.)
        The Include Files
        Memory Location Equates
        Program Constant Equates
        Program Origin
        Interrupt Vectors
        Initialization of the Math, Serial and Memory Model
        Initialization of the AIO
        Initialization of the DSP

```
        Handling Interrupts
        Serial Port IO and Exiting to the Monitor
        Wait Functions
        Defining Data Tables
        Using Pre-defined Data Tables
        The End
AIO Port Programming
        Setting the AIO conversion frequency
IO Port Programming
        Which Port does What
        Hardware Port IO Assignments
Debugging DSP-93 Programs
        Debug functions in the Monitor
        Debugging using LOC.ASM
        Monitor IO Routines
        Monitor Memory Usage
Assembling a DSP-93 Program
        How to assemble a file using TASM under DOS
        How to assemble a file using D93WE under Windows
        How to assemble a file using DSP-93Control under MacOS


Contributions by Ron Parsons, W5RKN Don Haselwood, K4JPJ Bob Stricklin,
N5BRG. Edited by Ron Parsons, W5RKN.


------------------------------------------------------------------------
Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
e-mail: TAPR@TAPR.ORG    http://www.tapr.org/tapr    ftp://ftp.tapr.org
```

3. Need some Input

```
From: Greg Jones <gjones@tenet.edu>
Date: Sun, 9 Jul 1995 19:36:02 -0500 (CDT)
To: tapr-sys@dingus.n5lyt.ampr.org (TAPR SYS),
        tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199507100036.TAA09609@Leslie-Francis.tenet.edu>
Rendered body type: text/plain
```

```
I just got the beta-version of the order form on www.tapr.org setup.

Need some tests of it.

try:

http://www.tapr.org:80/tapr/html/order.html


Let me know what you think and what needs to be changed.

Try as many orders as you like -- everything comes to me.

greg
```

4. ARRL CNC/DCC Web Index/Abstracts

```
From: Greg Jones <gjones@tenet.edu>
Date: Wed, 12 Jul 1995 03:03:18 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199507120803.DAA00805@Leslie-Francis.tenet.edu>
Rendered body type: text/plain
```

```
TAPR is proud to announce the creation of:

ARRL Amateur Radio Computer Networking Conferences and
Digital Communications Conferences Index and Abstracts (Web Pages)

Abstracts form all thirteen ARRL CNC/DCC proceedings can be viewed from
either the Packet Radio Page, Virtual Library or via the TAPR Page,
Products, Publications area.

The direct link is:
http://www.tapr.org/tapr/html/cncindex.html

This page has links to all 13 proceedings with abstracts from all the
articles.  Search capability is in the works.

If you have a proceedings articles available on the Internet, please contact
TAPR about generating a link from the abstract pages to your pages.
```

```
------------------------------------------------------------------------
Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
TAPR@TAPR.ORG     http://www.tapr.org/tapr     ftp://ftp.tapr.org/tapr
```

5. DCC Paper Deadline!

```
From: Greg Jones <gjones@tenet.edu>
Date: Fri, 14 Jul 1995 13:40:11 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing), netsig@tapr.org (NETSIG mailing),
        bbssig@tapr.org (BBS SIG mailing), hfsig@tapr.org (HF SIG mailing),
        dsp-93@tapr.org (DSP-93 Build), aprssig@tapr.org (BBS SIG mailing),
        amsat-bb@amsat.org (AMSAT BB Mail Group)
Message-ID: <199507141840.NAA28968@Leslie-Francis.tenet.edu>
Rendered body type: text/plain
```

```
Don't forget --  Friday, July 21st!  Deadline for ARRL DCC Article Submissions
------------------------------------------------------------------------------

* Anyone interested in digital communications is invited to submit a paper for
  publication in the Conference Proceedings.  Articles are welcome on any
  aspect of digital communications.

* Presentation at the Conference is not required for publication.

* Papers are due by July 21, 1995, and should be submitted to
  Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111 or via the
  Internet to mweinberg@arrl.org

* Please contact Maty for detailed format requirements.

* It is not to late to start writing!

---

If you think you will be late in submitting your paper(s), contact Maty to
arrange details.

---

14th Annual ARRL Digital Communications Conference
September 8-10th, 1995
Arlington, Texas (minutes from DFW airport)

The ARRL Digital Communications Conference is an international forum for
radio amateurs in digital communications, networking, and related
technologies to meet, publish their work, and present new ideas and
techniques for discussion.  Presenters and attendees will have the
opportunity to exchange ideas and learn about recent hardware and
software advances, theories, experimental results, and practical
applications. The Digital Communications Conference is not just for
the digital elite, but for digitally-orientated amateurs of all
levels of experience.

For further information:

E-Mail: TAPR@TAPR.ORG
Web   : http://www.tapr.org/tapr
ftp   : ftp://ftp.tapr.org/tapr/95_DCC_Flyer.pdf

------------------------------------------------------------------------
Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
```

6. DCC Abstracts now Searchable

```
From: Greg Jones <gjones@tenet.edu>
Date: Mon, 17 Jul 1995 01:54:23 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Cc: tapr-sys@dingus.n5lyt.ampr.org (TAPR SYS),
        tapr-board@tapr.org (TAPR Board), JBLOOM@ARRL.ORG (Jon Bloom)
Message-ID: <199507170654.BAA22156@Leslie-Francis.tenet.edu>
Rendered body type: text/plain
```

```
DCC/CNC Abstracts available for Searching
-----------------------------------------
After a few hours of programming tonight, the CNC and DCC abstracts can now
be searched.

The full address is:
        http://www.tapr.org/tapr/html/cncsearch.html
```

It can also be reached at the top level of the TAPR Home Page.
        http://www.tapr.org/tapr

Abstracts are linked back to there proceedings page.

This should provide an excellent reference and allow older works to
be brought back to life in newer articles and papers.

TAPR is proud to provide this capability.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000

7. TAPR's Regional Digital Group List

From: Greg Jones <gjones@tenet.edu>
Date: Mon, 17 Jul 1995 15:30:54 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing), bbssig@tapr.org (BBS SIG mailing),
        netsig@tapr.org (NETSIG mailing)
Cc: psr@tapr.org (PSR), tapr-board@tapr.org (TAPR Board),
        tapr-sys@dingus.n5lyt.ampr.org (TAPR SYS)
Message-ID: <199507172030.PAA20114@Leslie-Francis.tenet.edu>
Rendered body type: text/plain

Regional Digital Organizations List (7/1/95)

This list is now available as part of the TAPR Web Page.
        http://www.tapr.org/tapr/html/regional_groups.html

or can be accessed from the TAPR Home Page
        http://www.tapr.org/tapr

If your regional organization has a web page or Internet e-mail address,
please let us know, so that we can generate the required link from this
page to your page. We have linked as many as we know about.

=================

If you have corrections or additions to this list, please contact the
office. TAPR hopes to keep this list as accurate as possible in order to
refer information and individuals to their regional group(s).

Amateur Radio Research and Development Corp (AMRAD)
PO Box 6148
McLean, VA 22106-6148
Newsletter: AMRAD Newsletter

American Radio Relay League (ARRL)
225 Main St
Newington, CT 6111
Internet: INFO@ARRL.ORG
http://www.acs.oakland.edu/barc/arrl.html
Newsletter: QEX / Gateway

Arizona Packet Radio Association
8402 E Angus Dr
Scottsdale, AZ 85251

Central Illinois Packet Radio User Society (CIPRUS)
c/o Larry Keeran K9ORP
RR 1 Box 181
Hudson, IL 61748-9750

Central Iowa Technical Society (CITS)
c/o Ralph Wallio W0RPK
1250 Hwy G24
Indianapolis, IA   50125

Chicago Amateur Packet Radio Association (CAPRA)
PO Box 8251
Rolling Meadows, IL 60008
Newsletter: The CAPRA Beacon

Cincinnati Amateur Packet Radio Experimenters Society (CAPRES)
c/o John Schroer IV KA8GRH

948 Halesworth Dr
Forest Park, OH 45240

Colorado Digital Electronics (CODE)
3631 Brentwood Terrace
Colorado Springs, CO 80910
Internet: info@code.org

Colorado Packet Association (COPA)
c/o John Radomski KT0H
2080 S Fairplay
Aurora, CO 80014

Connecticut Digital Radio Association (CONNECT)
c/o Tom Hogerty, KC1J
83 Harold Rd
Farmington, CT 6032

Eastern Packet Radio of Michigan (EPROM)
c/o Jay Nugent WB8TKL
3081 Braeburn Cir
Ann Arbor, MI 48104

EastNet BackBone Network (EBN)
c/o John Gubernard, K2LSX
81 Harcourt Ave
Bergenfield, NJ 07621-1916

Florida Amateur Digital Communications Association (FADCA)
812 Childers Loop
Brandon, FL 33511
Newsletter: FADCA>Beacon

Georgia Radio Amateur Packet Enthusiast Society (GRAPES)
PO Box 871
Alpharetta, GA 30239-0871
http://www.mindspring.com/~bobm/grapes/grapes.html
Newsletter: Grapevine

Hamilton and Area Packet Network (HAPN)
Box 4466 Station D
Hamilton, ON L8V 4S7
Canada

HEX 9 Group
PO Box 151
Orilla, ON L3V 6J3
Canada

Mid-Atlantic Packet Radio Club
c/o Tom Clark W3IWI
6388 Guilford Rd
Clarksville, MD 21029

Mississippi Amateur Radio Digital Association (MARDA)
c/o Patrick J Fagan WA5DYV
2412 E Birch Dr
Gulfport, MS 39503

Mt Ascutney Amateur Packet Radio Association
c/o Carl Breuning N1CB
54 Myrtle St
Newport, NH 03773

Mt Beacon Amateur Radio Club
PO Box 841
Wappingers Falls, NY 12590

New England Packet Radio Association (NEPRA)
PO Box 208
East Kingston, NH 03827
Newsletter: NEPRA PacketEar

North East Digital Association (NEDA)
PO Box 563
Manchester, NH 03105
http://www.cam.org/~dino/neda/neda.html

Northern California Packet Association (NCPA)

6608B Alhambra Ave Suite 111
Martinez, CA 94553
Newsletter: NCPA Download

Northwest Amateur Packet Radio Association (NAPRA)
c/o John Gates N7BTI
750 Northstream Ln
Edmonds, WA 98020
Newsletter: Zero Retries

Ohio Packet Enthusiasts Club (OPAC)
c/o Bob Ball WB8WGA
830 Riva Ridge Blvd
Gahanna, OH 43230

Oregon Digital Network Coordination Council (ODNCC)
7860 SW 69th Av
Portland, OR 97223

Pacific Packet Radio Society (PPRS)
PO Box 51562
Palo Alto, CA 94303

Packet Radio Organization of Montana (PROM)
c/o Glenda Allen KE7TB
165 Conifer Rd
Libby, MT 59923

Packeteers of Long Island (POLI)
c/o Alex Mendelsohn AI2Q
92 Hathaway Av
Elmont, NY 11003
Newsletter: The POLI Parrot

Pennsylvania Packet Association (PaPA)
c/o Bryan Simanic WA3UFN
9 Wild Cherry Dr
DuBois, PA 15801

Puget Sound Amateur Radio TCP/IP Group
c/o Steve Stroh N8GNJ
14919 NE 163rd Street
Woodinville, WA 98072

Radio Amateur Satellite Corp (AMSAT)
PO Box 27
Washington, DC 20044
http://www.qualcomm.com/amsat/AmsatHome.html
Newsletter: AMSAT Journal

Radio Amateur Telecommunications Society (RATS)
c/o J Gordon Beattie Jr N2DSY
206 North Vivyen St
Bergenfield, NJ 07621
http://www.webcom.com/~arfunk/rats.html

Rochester Packet Group
c/o Fred Cupp W2DUC
27 Crescent Rd
Fairport, NY 14450

San Diego Packet Group (SDPG)
c/o Mike Brock WB6HHV
10230 Mayer Cir
San Diego, CA 92126

San Diego Packet Radio Association (SANDPAC)
c/o Barry Gershenfeld
5085 Arroyo Lindo Av
San Diego, CA 92117
Newsletter: San Diego Packet Radio Association Newsletter

South Carolina Amateur Radio Digital Society (SCARDS)
PO Box 1281
Columbia, SC 29202
Newsletter: SCARDS Newsletter

Southern Amateur Packet Society (SAPS)
c/o Wayne Harrell WD4LYV

Rt 1 Box 368
Sycamore, GA 31790

Southern California Digital Communications Council (SCDCC)
PO Box 2744
Huntington Beach, CA   92647-2744
Newsletter: The I-Frame

Tennessee Network (TENNET)
c/o Jeffrey Austen K9JA
2051 Clearview Drive
Cookeville, TN 38506
Internet: jra1854@tntech.edu

Texas Packet Radio Society (TPRS)
PO Box 50238
Denton, TX 76206-0238
Internet: wo5h@tapr.org
http://www.tapr.org/tprs
Newsletter: The TPRS Quarterly Report

Tucson Amateur Packet Radio Corporation (TAPR)
8987-309 E. Tanque Verde Rd #337
Tucson, AZ 85749-9399
Internet: TAPR@TAPR.ORG
http://www.tapr.org/tapr
Newsletter: Packet Status Register

TwinsLAN Amateur Radio Club
c/o Kermit Kramer W0RFD
1121 Xerxes Av S
Minneapolis, MN 55405
Newsletter: The TwinsLAN Beacon

Utah Packet Radio Association (UPRA)
c/o Bart Van Allen KA7ZFD
11883 S Kinney Cir
Riverton, UT 84065

Vancouver Amateur Digital Communications Group (VADCG)
9531 Odlin Rd
Richmond, BC V6X 1E1
Canada
Newsletter: The Packet

Wake Digital Communications Group (WDCG)
c/o Randy Ray WA5SZL
9401 Taurus Ct
Raleigh, NC 27612

Western Michigan Packet Radio Association (WMPRA)
PO Box 4612
Muskegon, MI   49444

Wisconsin Amateur Packet Radio Association (WAPRA)
PO Box 1215
Fond Du Lac, WI 54935
Newsletter: Badger State Smoke Signals

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
E-Mail: tapr@tapr.org   http://www.tapr.org/tapr   listserv@tapr.org

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August 1995

Original source file: tapr-bb.9508
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1995-08/TAPR-BB_1995-08.txt

1. Regional Digital Groups 8/1/95

From: Greg Jones <gjones@tenet.edu>
Date: Mon, 7 Aug 1995 10:01:43 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199508071501.KAA15878@Leslie-Francis.tenet.edu>
Rendered body type: text/plain

Regional Digital Organizations List (8/1/95)

If you have corrections or additions to this list, please contact the
office. TAPR hopes to keep this list as accurate as possible in order to
refer information and individuals to their regional group(s).

Amateur Radio Research and Development Corp (AMRAD)
PO Box 6148
McLean, VA 22106-6148
Newsletter: AMRAD Newsletter

American Radio Relay League (ARRL)
225 Main St
Newington, CT 6111
Internet: INFO@ARRL.ORG
http://www.acs.oakland.edu/barc/arrl.html
Newsletter: QEX / Gateway

Arizona Packet Radio Association
8402 E Angus Dr
Scottsdale, AZ 85251

Central Illinois Packet Radio User Society (CIPRUS)
c/o Larry Keeran K9ORP
RR 1 Box 181
Hudson, IL 61748-9750

Central Iowa Technical Society (CITS)
c/o Ralph Wallio W0RPK
1250 Hwy G24
Indianapolis, IA   50125

Chicago Amateur Packet Radio Association (CAPRA)
PO Box 8251
Rolling Meadows, IL 60008
Newsletter: The CAPRA Beacon

Cincinnati Amateur Packet Radio Experimenters Society (CAPRES)
c/o John Schroer IV KA8GRH
948 Halesworth Dr
Forest Park, OH 45240

Colorado Digital Eclectics (CODE)
3631 Brentwood Terrace
Colorado Springs, CO 80910
Internet: info@code.org
http://www.code.org/code/

Colorado Packet Association (COPA)
c/o John Radomski KT0H
2080 S Fairplay
Aurora, CO 80014

Connecticut Digital Radio Association (CONNECT)
c/o Tom Hogerty, KC1J
83 Harold Rd
Farmington, CT 6032

Eastern Packet Radio of Michigan (EPROM)
c/o Jay Nugent WB8TKL
3081 Braeburn Cir
Ann Arbor, MI 48104

EastNet BackBone Network (EBN)
c/o John Gubernard, K2LSX
81 Harcourt Ave
Bergenfield, NJ 07621-1916

Florida Amateur Digital Communications Association (FADCA)
c/o Joseph Kuntz, WB4TEM
812 Childers Loop
Brandon, FL 33511
Newsletter: FADCA>Beacon

Georgia Radio Amateur Packet Enthusiast Society (GRAPES)
PO Box 871
Alpharetta, GA 30239-0871
http://www.mindspring.com/~bobm/grapes/grapes.html
Newsletter: Grapevine

Hamilton and Area Packet Network (HAPN)
Box 4466 Station D
Hamilton, ON   L8V 4S7   Canada

HEX 9 Group
PO Box 151
Orilla, ON   L3V 6J3   Canada

Indiana Digital Experimenters Association (IDEA)
c/o John Hartman N5AAA
14659 Wellington Ct.
Noblesville IN   46060-4356

Manitoba Digitial Emergency Communications Groups (MDECG)
c/o Jim Townsend, VE4CY
2109-55 Garry St.
Winnipeg, MB R3C 4H4 Canada

Mid-Atlantic Packet Radio Club
c/o Tom Clark W3IWI
6388 Guilford Rd
Clarksville, MD 21029

Mississippi Amateur Radio Digital Association (MARDA)
c/o Patrick J Fagan WA5DYV
2412 E Birch Dr
Gulfport, MS 39503

Mt Ascutney Amateur Packet Radio Association
c/o Carl Breuning N1CB
54 Myrtle St
Newport, NH 03773

Mt Beacon Amateur Radio Club
PO Box 841
Wappingers Falls, NY 12590

Nevada Packet Coordinators Committee (NPCC)
PO Box 12116
Reno NV 89510
Newsletter: The NPCC Rag
Internet: ki3v@connectus.com

New England Packet Radio Association (NEPRA)
PO Box 208
East Kingston, NH 03827
Newsletter: NEPRA PacketEar

North East Digital Association (NEDA)
PO Box 563
Manchester, NH 03105
Internet: neda@teledm.com
http://www.cam.org/~dino/neda/neda.html

Northern California Packet Association (NCPA)
6608B Alhambra Ave Suite 111
Martinez, CA 94553
Newsletter: NCPA Download

Northwest Amateur Packet Radio Association (NAPRA)
c/o John Gates N7BTI
750 Northstream Ln

Edmonds, WA 98020
Newsletter: Zero Retries

Ohio Packet Enthusiasts Club (OPAC)
c/o Bob Ball WB8WGA
830 Riva Ridge Blvd
Gahanna, OH 43230

Oregon Digital Network Coordination Council (ODNCC)
7860 SW 69th Av
Portland, OR 97223

Pacific Packet Radio Society (PPRS)
PO Box 51562
Palo Alto, CA 94303

Packet Radio Organization of Montana (PROM)
c/o Glenda Allen KE7TB
165 Conifer Rd
Libby, MT 59923

Packeteers of Long Island (POLI)
c/o Alex Mendelsohn AI2Q
92 Hathaway Av
Elmont, NY 11003
Newsletter: The POLI Parrot

Pennsylvania Packet Association (PaPA)
c/o Bryan Simanic WA3UFN
9 Wild Cherry Dr
DuBois, PA 15801

Puget Sound Amateur Radio TCP/IP Group
c/o Steve Stroh N8GNJ
14919 NE 163rd Street
Woodinville, WA 98072
http://www.wetnet.wa.com/

Radio Amateur Satellite Corp (AMSAT)
PO Box 27
Washington, DC 20044
http://www.qualcomm.com/amsat/AmsatHome.html
Newsletter: AMSAT Journal

Radio Amateur Telecommunications Society (RATS)
c/o J Gordon Beattie Jr N2DSY
206 North Vivyen St
Bergenfield, NJ 07621
http://www.webcom.com/~arfunk/rats.html

Rochester Packet Group
c/o Fred Cupp W2DUC
27 Crescent Rd
Fairport, NY 14450

San Diego Packet Group (SDPG)
c/o Mike Brock WB6HHV
10230 Mayer Cir
San Diego, CA 92126

San Diego Packet Radio Association (SANDPAC)
c/o Barry Gershenfeld
5085 Arroyo Lindo Av
San Diego, CA 92117
Newsletter: San Diego Packet Radio Association Newsletter

South Carolina Amateur Radio Digital Society (SCARDS)
PO Box 1281
Columbia, SC 29202
Newsletter: SCARDS Newsletter

Southern Amateur Packet Society (SAPS)
c/o Wayne Harrell WD4LYV
Rt 1 Box 368
Sycamore, GA 31790

Southern California Digital Communications Council (SCDCC)
PO Box 2744
Huntington Beach, CA 92647-2744

Newsletter: The I-Frame

Tennessee Network (TENNET)
c/o Jeffrey Austen K9JA
2051 Clearview Drive
Cookeville, TN 38506
Internet: jra1854@tntech.edu

Texas Packet Radio Society (TPRS)
PO Box 50238
Denton, TX 76206-0238
Internet: wo5h@tapr.org
http://www.tapr.org/tprs
Newsletter: The TPRS Quarterly Report

Tucson Amateur Packet Radio Corporation (TAPR)
8987-309 E. Tanque Verde Rd #337
Tucson, AZ 85749-9399
Internet: TAPR@TAPR.ORG
http://www.tapr.org/tapr
Newsletter: Packet Status Register

TwinsLAN Amateur Radio Club
c/o Kermit Kramer W0RFD
1121 Xerxes Av S
Minneapolis, MN 55405
Newsletter: The TwinsLAN Beacon

Utah Packet Radio Association (UPRA)
c/o Bart Van Allen KA7ZFD
11883 S Kinney Cir
Riverton, UT 84065

Vancouver Amateur Digital Communications Group (VADCG)
9531 Odlin Rd
Richmond, BC V6X 1E1   Canada
Newsletter: The Packet

Wake Digital Communications Group (WDCG)
c/o Randy Ray WA5SZL
9401 Taurus Ct
Raleigh, NC 27612

Western Michigan Packet Radio Association (WMPRA)
PO Box 4612
Muskegon, MI   49444

Winnipeg Amateur Radio Packet group (WARP)
c/o Chris Setla, VE4SET
158 Fairlane Ave
Winnipeg, MB   R2Y OB3   Canada

Wisconsin Amateur Packet Radio Association (WAPRA)
PO Box 1215
Fond Du Lac, WI 54935
Newsletter: Badger State Smoke Signals

TAPR (Tucson Amateur Packet Radio)
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399

Phone : 817-383-0000   Fax   : 817-566-2544
web   : http://www.tapr.org/tapr   ftp   : ftp.tapr.org
e-mail: tapr@tapr.org
---

2. Shelton McAnelly, KD5SL

From: Greg Jones <gjones@tenet.edu>
Date: Mon, 7 Aug 1995 21:54:42 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing), bbssig@tapr.org (BBS SIG mailing)
Message-ID: <199508080254.VAA13564@Leslie-Francis.tenet.edu>
Rendered body type: text/plain

It is my sad duty to report the passing of Shelton McAnelly, KD5SL, of Baton Rouge, LA, this past Saturday (August 6th, 1995). Shelton was a long time supporter of packet radio and was a mainstay and prime leader on the HF packet network.

Shelton will be missed.

Greg Jones, WD5IVD

3. DCC 95 Update/Info

From: Greg Jones <gjones@tenet.edu>
Date: Tue, 8 Aug 1995 11:27:16 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199508081627.LAA18397@Leslie-Francis.tenet.edu>
Rendered body type: text/plain

The 1995 ARRL Digital Communications Conference is fast approaching!

Deadline for pre-registration is August 21st (Monday). The TAPR block of rooms expires August 25th...after that - it is on a first come basis. Be sure to tell the hotel that you are with in the TAPR block of rooms when making your room reservations.

Registration is starting to pickup and attendance seems to be on track. There is still plenty of room for Dinner and both Workshops.

Added to the schedule will be an HF forum Saturday, chaired by Johan, KC7WW.

American Airlines and some others are currently having another small airfare war -- so check where you are about prices to D/FW. Several has asked about SouthWest airlines. SouthWest does not fly into D/FW, so individuals using Southwest will need to take a SuperShuttle from Love Field to the Hotel.

TAPR is looking forward to seeing everyone the second weekend in September in Arlington, Texas.

Press Release: June 1, 1995
1995 ARRL Digital Communications Conference
September 8-10th, 1995
Arlington, Texas (minutes from DFW airport)

Permission is granted to reprint any or all parts of this press release.

Full text is available on the Internet:
FTP: ftp.tapr.org WWW: hhtp://www.tapr.org/tapr E-Mail: tapr@tapr.org
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It's that time again! Time to make your travel plans and put the finishing touches on your work for the upcoming 14th Annual ARRL Digital Communications Conference.

The ARRL Digital Communications Conference is an international forum for radio amateurs in digital communications, networking, and related technologies to meet, publish their work, and present new ideas and techniques for discussion. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. The Digital Communications Conference is not just for the digital elite, but for digitally-orientated amateurs of all levels of experience.

The 1995 Digital Communications Conference will be held on September 8-10th, 1995 in Arlington, Texas. Arlington is just minutes away from the Dallas/Ft. Worth International Airport, which is located in the middle of the country, and airfares have never been cheaper for this conveniently-located conference.

Not only is the Digital Communications Conference technically stimulating, it is a weekend of fun for all who have more than a casual interest in any of the ham digital communications modes. This includes BBS operators, networkers, DX-Cluster Sysops, software writers, modem designers, and digital satellite communications enthusiasts. The Digital Communications Conference is for all levels of digital operators -- a must conference to attend to get active on a national level. Now, more than ever, amateur radio needs this great meeting of the minds, since it is important that we demonstrate a continued need for the rich frequency allocations we now have by pushing forward and documenting our achievements. The ARRL Digital Communications Conference is one of the few ways to record our accomplishments and challenge each other to do more.

What can you expect during the 14th annual Digital Communications Conference ?

* A full day of papers and breakouts on Saturday for the beginner to the advanced amateur digital enthusiast.

* Two workshops, one on APRS on Friday and one on making use of the new PCS (Personal Communications Service) technology on Sunday.

* A Texas-sized banquet with a Special Guest Speaker.

* SIGs (Special Interest Groups) on Saturday following the banquet.

* Informal get-togethers throughout the weekend.

* A meeting facility that is perfect for this type of meeting.

* Vendor area and informal engineering discussions.

* Scores of nearby restaurants and entertainment (Six Flags Over Texas, The Ballpark at Arlington, Wet 'n Wild, golf).

* An event at which the most important new developments in amateur digital communications are announced.

* Digital 'movers and shakers' from all over the world in attendance.

* Plenty of Texas hospitality!

In addition to the presentation of papers on Saturday, two workshops will be held during the conference. On Friday, Keith Sproul, WU2Z, will hold a workshop on APRS packet-location software. Keith is the Chair of the TAPR APRS Special Interest Group, developer of the Macintosh version of APRS, and a leader in the area of APRS technology. This is a unique opportunity to gain insight into this fast growing new digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning Satellites). On Sunday, Dewayne Hendricks, WD8DZP, will conduct a workshop focusing on a survey of Personal Communications Systems and their applications and use in the Amateur Radio Service. Dewayne is an expert in the area of commercial wireless systems; his company WarpSpeed Imagineering, focuses on wireless Internet. This workshop presents an opportunity to learn how Personal Communications Technology (handheld and small business wireless systems) can be used in the amateur service.

If you have attended a Digital Communications Conference in the past, just remember back to how much fun it was discussing the latest developments into the wee hours! If you have never been, then make your plans now to attend and find out how much fun the Digital Communications Conference can be.

There are few activities where the importance of your participation can be so much fun and important! What a great way to share and renew your enthusiasm for digital amateur radio! Getting together with colleagues from all over the world and bringing each other up to date on your latest work. All this, and more, for an unforgettable weekend of ham radio and digital communications. Make your travel and lodging arrangements now. We hope to see you at the ARRL Digital Communications Conference on September 8-10!

Full information on the conference and hotel information can be obtained by contacting Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road, Tucson, AZ 85749-9399. Phone: (817) 383-0000. Fax: (817) 566-2544. Internet: TAPR@TAPR.ORG

Sincerely,
Greg Jones, WD5IVD - President, Tucson Amateur Packet Radio
Dave Wolf, WO5H - President, Texas Packet Radio Society

Note: If you need handouts or flyers for meetings, contact TAPR about getting what you need!

Hotel Information

        Conference presentations, meetings, and workshops, will be held at the
La Quinta Inn and Conference Center, 825 N Watson Road, Arlington, Tx, (800)
531-5900, (817) 640-4142, Fax (817) 649-7864, intersection of I-30 and Texas
360. Rooms rates are $53/single, $58/double, $63/triple, and $85+ for
suites. When making reservations with the hotel, be sure to indicate you
are attending the conference. Six Flags (larger than Disney Land), the
Texas Rangers, and several other attractions are within a few miles of the
hotel. If you are planning to stay at the hotel, it is highly recommended
that you book your room prior to August 25th, 1995 -- a block of 100 rooms
is reserved for Friday and Saturday. The hotel provides transportation to
and from D/FW International Airport. You should contact the hotel to
arrange airport transportation.

Registration

        Contact the TAPR office by Phone, Fax, or e-mail (Internet: tapr@tapr.org)
to pre-register or for additional meeting information. MasterCard and VISA
accepted.

Digital Communications Conference
================================
  - Pre-Registration (before August 21st) $30.00 *

  - Late Registration or at door $35.00 *

       * - Conference Registration includes:
           Conference Proceedings, Sessions, Meetings, and Lunch.

  - Saturday Evening Dinner $17.00 **

       ** - Dinner, Speaker, Prize Drawing (Limited Space)

Workshops
=========
APRS Workshop, Friday, 4pm - 7pm. Conducted by Keith Sproul, WU2Z

  - Pre-Registration (before August 21st) $10.00

  - Late Registration or at door $15.00

PCS Workshop, Sunday, 9:00am - 1:00pm. Dewayne Hendricks, WA8DZP
Survey of Personal Communications Systems (PCS) Technologies and their
application and use in the Amateur Radio Service

  - Pre-Registration (before August 21st) $10.00

  - Late Registration or at door $15.00

Contact TAPR to register for the DCC.
Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road, Tucson, AZ
85749-9399. Phone: (817) 383-0000. Fax: (817) 566-2544.
Internet: TAPR@TAPR.ORG

4. KD5SL SK

From: Greg Jones <gjones@tenet.edu>
Date: Tue, 8 Aug 1995 21:05:05 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing), psr@tapr.org (PSR),
        bbssig@tapr.org (BBS SIG mailing)
Message-ID: <199508090205.VAA15445@Leslie-Francis.tenet.edu>
Rendered body type: text/plain

According to Adam Tate:
Date: Tue, 8 Aug 1995 16:44:39 -0500 (CDT)
From: Adam Tate <atate@tyrell.net>
Subject: KD5SL SK (fwd)

You've probably already heard this news from me or someone else, but I
felt that I should post this as somewhat of a formality.

Shelton, KD5SL, passed away sometime between midday Friday and Sunday
evening. The exact cause of his death is currently unknown, but sources
close to him (Milton, KA5JPH) report that he "died in his chair,"
evidently a peaceful passing. Hams suspected that something wasn't right

when Shelton failed to show up for the 9:00 pm net Sunday on 145.49.
After playing the Newsline and taking checkins to the net, Gary, KC5BMA,
drove over to Shelton's house. After receiving no answer to his knocks
at the door, he called Robert, Shelton's younger son, who entered the house.

KD5SL's life was marked by many interesting experiences. He studied
Chemical Engineering at LSU during the late 30's and early 40's. He then
joined the U.S. Navy, serving as an Ensign and attending radar and
electronics school at Harvard and MIT. After obtaining his J.D. degree,
he worked for the U.S. Patent Office as a patent attorney. My
recollection (not entirely accurate) is that he settled in Baton Rouge
about 1955 or so.

Having already been active in CB radio, Shelton obtained his first ham
license in 1979. He served as president of BRARC in the early 80's, then
went on to found RASC in 1984. In 1986 he began work with packet, then
the newest mode in ham radio, and started Baton Rouge's first packet
BBS. Over the years he built BTR's packet facilities to be the best in
Louisiana and among the best in the country, including nodes/digipeaters
on 145.01, 145.07, 145.09, and 446.1 MHz, and his ever-growing packet BBS
with forwarding facilities on 15, 20, and 30 meters. Beginning in 1992,
he maintained a telephone BBS which at one time included more than 10
CD-ROMs online. Last but certainly not least, he built and maintained
the 145.49 repeater since the founding of RASC.

KD5SL was also well-known for his activities in public service. In the
four years that I have known him I have seen him work countless balloon
championships, road races, hurricane shelters, Senior and Special Olympics,
LPB telethons, outdoor concerts...the list goes on. His dedication to
public service in Baton Rouge will probably be his most-missed quality.

Shelton was known to all of us as a powerful and sometimes stubborn
leader, but there was never any doubt that he could get any job done.
When I first discovered ham radio in 1991, Shelton was my first
contact/"Elmer", and I soon discovered that he never missed the chance to
help out another young person in ham radio. Instead of treating youths
as youths are often accustomed to being treated by other hams, he treated
them as he would his own friends. He will be sorely missed.

73, Adam, AB5PO

5. 1995 DCC Update

From: Greg Jones <gjones@tenet.edu>
Date: Sun, 20 Aug 1995 17:30:31 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Cc: dcc@tapr.org (Digital Comm Conf)
Message-ID: <199508202230.RAA24523@Leslie-Francis.tenet.edu>
Rendered body type: text/plain

1995 ARRL Digital Communications Conference
September 8-10th, 1995
Arlington, Texas (minutes from DFW airport)

Full text is available on the Internet:
FTP: ftp.tapr.org   WWW: http://www.tapr.org/tapr   E-Mail: tapr@tapr.org
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Pre-registration ends (Monday) August 21st! Register early and save
money. Registration for the conference will continue up to and through the
conference.

The Table of Contents for the Proceedings is attached below. Many
of the papers will be presented along with breakout sessions and workshops.
The conference is shaping up nicely.

The 1995 Digital Communications Conference will be held on September
8-10th, 1995 in Arlington, Texas. Arlington is just minutes away from the
Dallas/Ft. Worth International Airport.

Tentative Schedule Overview (as of 8/20). A full detailed schedule
will be sent after confirmation from speakers are received.

    Friday, September 8th, 1995
        3:00pm - 6:00pm   Registration
        4:00pm - 7:00pm   APRS Workshop, Keith Sproul, WU2Z

Saturday, September 9th, 1995
8:00am - 5:00pm DCC Registration

Session 1a - 8:30am - 10:10am (110 mins)
Paper Session #1

Session 1b - 8:45am - 10:15am (115 mins)
Beginning/Intermediate Session #1

Session 2a - 10:30am - 12noon (90 mins)
Paper Session #2

Session 2b - 10:30am - 12noon (90 mins)
Beginning/Intermediate Session #2

Lunch - 12noon - 1:30pm

Session 3 - 1:30pm - 3:30pm (120 min)
Paper Session #3

Session 4 - 4:00pm - 5:00pm
Breakout Session

Dinner - 6:00pm - 8:00pm
Banquet Speaker (TBA)

Informal Meeting Area - 8:00pm

Sunday, September 10th, 1995
9:00am - 1:00pm PCS Workshop, Dewayne Hendricks, WA8DZP

The beginning/intermediate sessions will cover the following topics during the two Saturday morning sessions: Introduction to Digital Communications, Introduction to HF Digital Communications, Introduction to Packet Networking, Introduction to APRS, Introduction to TCP/IP, and Introduction to Satellite Communications. The three paper sessions will present information from the proceedings.

The ARRL Digital Communications Conference is an international forum for radio amateurs in digital communications, networking, and related technologies to meet, publish their work, and present new ideas and techniques for discussion. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. The Digital Communications Conference is not just for the digital elite, but for digitally-orientated amateurs of all levels of experience.

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Full information on the conference and hotel information can be obtained by contacting Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road, Tucson, AZ 85749-9399. Phone: (817) 383-0000. Fax: (817) 566-2544. Internet: TAPR@TAPR.ORG

Sincerely,
Greg Jones, WD5IVD - President, Tucson Amateur Packet Radio
Dave Wolf, WO5H - President, Texas Packet Radio Society

Hotel Information

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Registration

Contact the TAPR office by Phone (817) 383-0000, Fax (817) 566-2544, e-mail (Internet: tapr@tapr.org) or www.tapr.org to register or for additional meeting information. MasterCard and VISA accepted.

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14th Annual ARRL Digital Communications Conference Proceedings (176 pages)

Availability of Seventy 9600 Baud Packet Channels on Two Meters
Bob Bruninga, WB4APR

The WA4DSY 56 Kilobaud RF Modem
Dale A Heatherington, WA4DSY

Extended Sequency Number (Modulo-128) Option for AX.25
Rob Janssen, PE1CHL

DSP-93 Update: The TAPR/AMSAT Joint DSP Project
Greg Jones, WD5IVD, Bob Stricklin, N5BRG, Robert Diersing, N5AHD

Introduction to Programming the TAPR/AMSAT DSP-93
Ron Parsons, W5RKN, Don Haselwood, K4JPJ, Bob Stricklin, N5BRG

An Introduction to FlexNet
Gunther Jost, DK7WJ, Don Rotolo, N2IRZ

Convolutional Decoders for Amateur Packet Radio
Phil Karn, KA9Q

Data Radio Standard Test Methods
Burton Lang, VE2BMQ, Don Rotolo, N2IRZ

Modeling Some Data Communications functions Using Microsoft Excel 5.0
Thomas C McDermott, N5EG

Building a Packet Network
Karl Medcalf, WK5M

DAMA - Another Network Solution
Karl Medcalf, WK5M

The Tulsa National Service TexNet Interface Project
        Bob Morgan, WB5AOH, Greg Jones, WD5IVD

An Update on TexNet and the Texas Packet Radio Society
        Bob Morgan, WB5AOH, Greg Jones, WD5IVD

DSP-93 Programming Hints
        Frank Perkins, WB5IPM

NETMGR: A Graphical Configuration for ROSE X.25 Packet Switch Networks
        William Slack, NX2P, Donald Rotolo, N2IRZ

Graphical Information Systems and Ham Radio
        Keith Sproul, WU2Z

AX.25 Transport Layer Drivers for TCP/IP
        Mark Sproul, KB2ICI, Tim Hayes, N2KBG

The Puget Sound Amateur Radio TCP/IP Network
        Steve Stroh, N8GNJ

6PACK - A Real Time PC to TNC Protocol
        Matthias Welwarsky, DG2FEF

Skimming the Layers
        Ken Wickwire, KB1J

Recommendation for Hierarchical Addressing Protocol
        Dave Wolf, WO5H, Roy Engehausen, AA4RE, Hank Oredson, W0RLI

****

6. HamCon '95, Sept 1-3

From: Greg Jones <gjones@tenet.edu>
Date: Wed, 23 Aug 1995 12:23:43 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199508231723.MAA08629@Leslie-Francis.tenet.edu>
Rendered body type: text/plain

HamCon 95 - ARRL Southwestern Division Convention
September 1-3, 1995, Long Beach, CA

TAPR will be attending the ARRL Southwestern Division Convention, September
1-3, 1995, abroad the Queen Mary in Long Beach, CA. If you are a TAPR
member please come by and say hello to all those working the booth! We will
be in booth #123, not sure which level of the ship.

Exhibit Hours:
        Fri   5pm - 8pm
        Sat   9am - 5pm
        Sun   9am - 12 noon

An informal TAPR gathering and dinner is scheduled for Saturday evening
after the exhibit area closes. Come by the TAPR booth Saturday to find out
what the plan will be for Saturday evening.

TAPR (Tucson Amateur Packet Radio)
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399

Phone : 817-383-0000   Fax   : 817-566-2544
web   : http://www.tapr.org/tapr   ftp   : ftp.tapr.org
e-mail: tapr@tapr.org
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7. 14th DCC Abstracts Available

From: Greg Jones <gjones@tenet.edu>
Date: Wed, 23 Aug 1995 15:29:44 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199508232029.PAA29947@Leslie-Francis.tenet.edu>
Rendered body type: text/plain

1995 ARRL Digital Communications Conference Abstracts Available
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The abstracts for the 1995 ARRL DCC Proceedings have been placed on-line and

are also available in the DCC topic search engine.

Check:
        http://www.tapr.org/tapr/html/dccconf.html

ARRL CNC/DCC Search Engine:
        http://www.tapr.org/tapr/html/cncsearch.html

Both are available from the www.tapr.org home page

The 1995 Digital Communications Conference will be held on September 8-10th,
1995 in Arlington, Texas. Arlington is just minutes away from the
Dallas/Ft. Worth International Airport. Conference presentations, meetings,
and workshops, will be held at the La Quinta Inn and Conference Center, 825
N Watson Road, Arlington, Tx, (800) 531-5900, (817) 640-4142.

For full information on the conference contact TAPR.

TAPR (Tucson Amateur Packet Radio)
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399

Phone : 817-383-0000   Fax   : 817-566-2544
web   : http://www.tapr.org   ftp   : ftp.tapr.org
e-mail: tapr@tapr.org
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8. 1995 ARRL DCC - Tentative Schedule (8/26/95)

From: Greg Jones <gjones@tenet.edu>
Date: Sat, 26 Aug 1995 02:04:30 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199508260704.CAA31015@Joyce-Perkins.tenet.edu>
Rendered body type: text/plain

1995 ARRL DCC - Tentative Schedule (8/26/95)

A number of amateurs have asked to see the tentative schedule.
For more information check http://www.tapr.org, ftp.tapr.org, or
e-mail tapr@tapr.org

Pre-Registration packets are being mailed currently.
If you haven't pre-registered, you can register up till and
at the conference.

Please feel free to pass the word on the DCC to others.

Hope to see you there!

Cheers - Greg, WD5IVD

Friday, September 8th, 1995

        3:00pm - 6:00pm Registration opens at 3pm (foyer)
        4:00pm - 7:00pm APRS Workshop, Keith Sproul, WU2Z

Saturday, September 9th, 1995

Times inside each session are approximate. Each session will begin on
time. Time will be available after each presentation for limited
questions from the audience depending on the amount of time used by the
presenter.

        8:00am - 5:00pm DCC Registration   (foyer)

        8:20am Welcome, Dave Wolf, WO5H & Greg Jones, WD5IVD

Session 1a * 8:30am - 10:10am   Room: Johnson Station
        8:30am   AX.25 Transport Layer Drivers for TCP/IP
                      Mark Sproul, KB2ICI   [p. 119]
        9:00am NETMGR: A Graphical Configurator for ROSE X.25 Networks,

```
                    Donald Rotolo, N2IRZ      [p. 101]
        9:30am  TAPR/AMSAT DSP-93, Frank Perkins, WB5IPM        [p20, 27, 97]


Session 1b * 8:45am - 10:15am   Room: Mill Creek
        8:45am  Introduction to Digital Communications, Jim Neely, WA5LHS
        9:15am  Introduction to HF Digital Communications, Johan Forrer, KC7WW
        9:45am  Introduction to Packet Networking, TBD

---

Session 2a * 10:30am - 12noon   Room: Johnson Station
        10:30am Convolutional Decoders for Amateur Packet Radio,
                    Phil Karn, KA9Q   [p. 45]
        11:00am Modeling Some Data Communications Functions Using Excel,
                    Tom McDermott, N5EG       [p. 56]
        11:30am Data Radio Standard Test Methods, Donald Rotolo, N2IRZ  [p 51]


Session 2b * 10:30am - 12noon   Room: Mill Creek
        10:30am Introduction to APRS, Keith Sproul, WU2Z
        11:00am Introduction to TCP/IP, John Ackermann, AG9V
        11:30am Intro to Satellite Communications, Robert Diersing, N5AHD

---

Lunch * 12noon - 1:30pm Room: Arlington Downs

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Session 3 * 1:30pm - 3:30pm     Room: Johnson Station
        1:30pm  An Introduction to FlexNet, Gunther Jost, DK7WJ [p. 37]
        2:00pm  Building a Packet Network & DAMA, Karl Medcalf, WK5M  [p. 65,73]
        2:30pm  The Tulsa NWS TexNet Interface Project, Bob Morgan, WB5AOH [77,86]
        3:00pm  Graphical Information Systems and Ham Radio,
                    Keith Sproul, WU2Z        [p. 108]

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Session 4 * 3:45pm - 5:00pm
        Room: University Hall
             HF SIG / HF Digital Issues, Conducted by Johan Forrer, KC7WW
        Room: Rush Creek
             APRS Topics and Issues, Conducted by Keith Sproul, WU2Z
        Room: Johnson Station
             RUDAK-U/P3D Topics and Issues, Conducted by BDale Garbee, N3EUA

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Dinner * 6:00pm - 8:00pm        Room: Arlington Downs
                Banquet Speaker: Phil Karn, KA9Q

        8:00pm - 11:00pm        Informal Meeting Area   Room: Rush Creek


Sunday, September 10th, 1995
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        9:00am  -       1:00pm  PCS Workshop, Dewayne Hendricks, WA8DZP (Room:
Johnson Station) (Personal Communications Systems)

        ARRL Future Systems Committee Meeting (Time TBA)



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TAPR (Tucson Amateur Packet Radio)
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
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Phone : 817-383-0000                Fax   : 817-566-2544
web   : http://www.tapr.org/tapr    ftp   : ftp.tapr.org
e-mail: tapr@tapr.org
------------------------------------------------------------------------
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September 1995

Original source file: tapr-bb.9509
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1995-09/TAPR-BB_1995-09.txt

1. TAPR.ORG Down Time

From: Greg Jones <gjones@tenet.edu>
Date: Wed, 6 Sep 1995 00:50:25 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199509060550.AAA16209@Leslie-Francis.tenet.edu>
Rendered body type: text/plain

The TAPR.ORG system will be off-line Saturday (after Lunch) until Sunday.
The system is going through an upgrade and system exchange to the system the
TAPR BoD allocated in August.

Cheers - Greg

2. PSR Deadline

From: Greg Jones <gjones@tenet.edu>
Date: Tue, 19 Sep 1995 02:34:49 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199509190734.CAA29929@Leslie-Francis.tenet.edu>
Rendered body type: text/plain

Deadline for the TAPR PSR is this Friday. If you have something for the
PSR, contact Bob Hansen, N2GDE@TAPR.ORG, PSR editor.

Cheers - Greg, WD5IVD

3. Re: [TAPR-BB:120] PSR Deadline

From: Greg Jones <gjones@tenet.edu>
Date: Tue, 19 Sep 1995 03:37:50 -0500 (CDT)
To: tapr-bb@tapr.org
Message-ID: <199509190837.DAA19245@Leslie-Francis.tenet.edu>
Rendered body type: text/plain

Or as Bob has pointed at -- send e-mail to PSR@TAPR.ORG

POB 1902, Elmira, NY 14902-1902

Cheers - Greg

According to Greg Jones:
>
>
> Deadline for the TAPR PSR is this Friday. If you have something for the
> PSR, contact Bob Hansen, N2GDE@TAPR.ORG, PSR editor.
>
> Cheers - Greg, WD5IVD
>
>

4. TAPR Software library listings

From: Greg Jones <gjones@tenet.edu>
Date: Fri, 22 Sep 1995 20:47:50 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199509230147.UAA11108@beall.tenet.edu>
Rendered body type: text/plain

According to Bob Nielsen:
Date: Fri, 22 Sep 1995 15:16:02 -0500
From: "Bob Nielsen" <nielsen@primenet.com>

Tucson Amateur Packet Radio Corp.
8987-309 E Tanque Verde Rd #337
Tucson, AZ. 85749-9399
Phone: (817) 383-0000
Fax: (817) 566-2544
Internet: tapr@tapr.org

TAPR is a Non-Profit R & D Corporation

TAPR SOFTWARE LIBRARY

In addition to supplying various kits and firmware, TAPR maintains a
library of packet radio-related computer software. It is now
available by anonymous FTP from ftp.tapr.org as well as on disk.
The FTP library may also contain software which is not available
from TAPR on disk. The file /tapr/software_lib/00-index.txt contains
the complete list.

Additions to the software library are always welcome, however we do
request that they be submitted either by, or with the expressed
permission of, the author. TAPR attempts to provide the latest
versions of all software; updates are appreciated. TAPR reserves
the right to screen any submissions and restrict the library
content as necessary. Both freeware and shareware are acceptable.
Software may be uploaded to the /tapr/software_lib/UPLOAD
directory. Please read the README file in that area regarding
notification of uploads to the librarian. Please direct any
questions to softlib@tapr.org.

****

     Current versions of disks in the TAPR software library - As of
17 August 1995

Key:

(*) Indicates two 3-1/2" disks.

Disk	Pgm Name	Version	Filename (/tapr/software_lib/xxx)
1.	APLINK	VER. 7.01	/bbs/apl701.exe
2.	AA4RE BBS	VER. 2.12	/bbs/bb212.zip
3.	CBBS	VER. 7.30	/bbs/cbbs73.zip
4.	EZPAC	VER. 1.1	/misc/ezpac11.zip
5.	MONAX		/misc/monax.zip
	PRAFFIC	VER. 2.05E	/misc/praf205e.zip
	PACKHACK	VER. 8	/misc/phack8.zip
6.	Ham Comm	VER. 3.08	/misc/hco308.zip
7.	TNC2 Manual & EPROM's	VER. 1.18A	/tnc/eproms.exe
			/tnc/hostmode.exe
			/tnc/tncdocs.exe
8.	Utilities		
	7PLUS	VER. 2.02	/utils/7plus20.exe
	LHA	VER. 2.11	/utils/lha211.exe
	PKARC	VER. 3.6	/utils/pk36.exe
	PKZIP/PKUNZIP	VER. 2.04G	/utils/pkz204g.zip
	R95	VER. 4.0	/utils/r9540.exe
	UUENCODE/UUDECODE	VER. 5.40	/utils/uuexe540.exe
	ZOO	VER. 2.10	/utils/zoo21.exe
9.	ROSERVER PRMBS	VER. 1.73	/bbs/rsvr173.zip
10.	ROSE X.25 SWITCH	VER. 3.3	/switch/rosesw33.zip
11.	KA9Q NET	VER. K36	
	Executable and Documentation		/tcpip/netk36ex.zip
	Source Code		/tcpip/netk36sr.zip
12.	WXN Weather Svr.	VER. 5.11	/misc/wxn511.zip
13.	TNC1 CODE - TNC-2 Notes		/tnc/tnc1src.zip
			/tnc/tnc2not.zip
14.	WINLINK	VER. 1.2	/bbs/wnl12.exe
15.	WA7MBL BBS	VER. 5.14	/bbs/mbl514.zip
16.	W0RLI BBS	VER. 18.05	/bbs/rli1805.exe
17.	YAPP	VER. 2.0	/terminal/yapp.zip
18.	INTRO TO TCP/IP		/tcpip/tcpintro.zip
19.	LAN-LINK	VER. 2.32	/terminal/ll232.zip
20.	ARESDATA	VER. 1.6	/misc/aresdata.zip
21/A	MSYS	VER. 1.18	/bbs/msys118.zip
22.	G8BPQ NODE	VER. 4.08a	/switch/bpq408a.zip
23.	DELETED		
24.	THS	VER. 2.50	/terminal/ths.zip
25.	VE4UB NTS	VER. 091891	/misc/ntsve4ub.exe
26.	NM1D DOSGATE	VER. 1.14	/misc/dosgate.zip
27.	SV7AIZ BBS	VER. 4.51	/bbs/aiz451.exe
28.	TEXNET	VER. 1.6	/switch/tprs16.zip
29.	Intro to Packet Radio	6/16/95	/misc/intropkt.zip
30.	Microsat Ground-Station Software		
	PB	04/30/92	/sat/microsat.zip
	PG	02/25/92	"
	PFHADD	03/24/92	"

	PHS	12/21/90	"
31.	DELETED		
32.	PAMS	VER. 2.09	/bbs/pams209.zip
33.	TNC2 Mon. Z80		/tnc/monz80.zip
34.	GIL	VER. 1.03	/misc/gil1-03.zip
35/A	PAKET	VER. 6.1	/terminal/paket61.zip
36/A	F6FBB BBS	VER. 5.15	/bbs/f6fbb515.zip
37.	TPK	VER. 1.82	/terminal/tpk182.zip
38.	JNOS (Executables, Doc's)	VER. 1.10K	/tcpip/jnos110k.exe /tcpip/docs110k.zip
39/A	JNOS (Source for 38)	VER. 1.10K	/tcpip/jnos110k.zip
40.	SP (Eskay Packet)	VER. 6.50	/terminal/sp650.exe
41.	TAPR DevMeter source & tools		/misc/devmtr.zip
42.	PCTOR	VER. 3.02	/terminal/pctor302.zip
43.	METCON source & tools	VER. 1.07	/misc/metcon.zip

The following is a brief description of the current listings in the TAPR software library.

1. APLINK - A concurrent AMTOR MBO and packet BBS system by Victor D. Poor, W5SMM.

2. BB - A multiconnect packet mailbox program by Roy Engehausen, AA4RE. Requires the use of AEA or WA8DED host mode or G8BPQ switch software for operation.

3. C-BBS - Packet BBS program written in C language. Originally written by Hank Oredson, W0RLI, current version by K3RLI and AG3F.

4. EZPAC11 - A menu-driven NTS message formatter by Mike Imel. Disk also contains a copy of WA7MBL's YAPP terminal program.

5. MONAX (NK6K & WB6YMH), PRAFFIC (IW3FQG) and PACKHACK (K7EA) - Programs for monitoring a packet radio channel and gathering system statistics.

6. Ham Comm - A DSP RTTY program with VGA spectrum display, oscilloscope, tuning indicator, all real time. Uses simple 1 chip interface, schematic included, all parts available at Radio Shack. Powered by serial port.

7. Manual and EPROM's for TAPR TNC2
Assembly & operating manuals for TAPR TNC-2 plus EPROM images for 1.1.8a firmware, KISS & state machine

8. Utility programs for Binary-to-ASCII conversion and file compression.

9. ROSERVER/PRMBS - A packet radio BBS with telephone modem support by Brian Riley, KA2BQE.

10. ROSE - The ROSE switch by Tom Moulton, W2VY.

11. KA9Q NET - Executables and source code for the NET version of TCP/IP by Phil Karn, KA9Q, with enhancements by Joe Buswell, K5JB.

12. WXN Weather Server - A multi-user weather server that runs as an application on the G8BPQ switch. Uses the Heath ID-5001 Advanced Weather Computer for weather data. Includes PC user program that runs on a TNC2.

13. TNC-1 source code - Source for the TAPR TNC-1 firmware, TNC-2 Notes.

14. WINLINK - A BBS system for AMTOR, PACTOR, CLOVER and packet by Vic Poor, W5SMM and Hans Kessler, N8PGR.

15. WA7MBL BBS - Packet BBS system by Jeff Jacobsen, WA7MBL.

16. W0RLI BBS - Packet BBS system by Hank Oredson, W0RLI.

17. YAPP - A packet terminal program by Jeff Jacobsen, WA7MBL. Supports split-screen operation, ASCII and binary file transfer.

18. INTRO TO TCP/IP - Much descriptive and reference information on TCP/IP.

19. LAN-LINK - Packet terminal program by Joe Kasser, G3ZCZ. Also supports the non-packet modes of PK-232, KAM and MFJ-1278.

20. ARES/Data - A packet radio data base system for emergencies by Weo Moerner, WN6I and Dave Palmer, N6KL.

21/21A MSYS - A multiconnect BBS with telephone modem, terminal, node and

TCP/IP support by Mike Pechura, WA8BXN. Requires KISS mode.

22. G8BPQ NODE - A NET/ROM-compatible multiconnect software packet switch by John Wiseman, G8BPQ, which can be run standalone or in conjunction with a BBS package, ARES/Data or DX Cluster software.

23. Deleted

24. THS - A terminal program for TNCs with WA8DED firmware or the DRSI PC*PA by Peter Heinrich, HB9CVV.

25. NTS traffic generator - A software package for generating NTS traffic by Bill Bowman, VE4UB.

26. NM1D DOSgate - A program allowing remote operation of a PC via packet radio by Rich Bono, NM1D.

27. SV7AIZ BBS - a multiuser, multiport BBS by Spiros Kavalaris, SV7AIZ for WA8DED/AEA host, DRSI or KISS TNC running G8BPQ switch.

28. TEXNET Applications - Software for use with the TEXNET switch by Texas Packet Radio Society.

29. INTRO TO PACKET RADIO - A tutorial on Packet Radio by Larry Kenney, WB9LOZ.

30. MICROSAT Ground Station Software - Programs and information for use with the MicroSats (AO-15, DO-17, WO-18 and LO-19) as well as UO-14 by Harold Price, NK6K and Jeff Ward, G0/K8KA.

31. deleted

32. PAMS - A Personal AMTOR Mailbox System by Victor D. Poor, W5SMM.

33. TNC-2 Monitor - A Z-80 monitor for the TNC-2 and clones by Paul Newland, AD7I.

34. GIL - Graphics Interchange Language - Permits a convenient way to transmit more than just ASCII text messages, such as animated graphics drawings or diagrams over digital radio links.

35/35A PAKET - A TNC-2 program with features such as windowed operation for multi-connects by Tony Lonsdale, VK2DHU.

36/36A F6FBB BBS - Supports 15 languages, YAPP support, multiconnects, compressed message forwards.

37. TPK - French language terminal program with many features by Gerard Regnard, F1EBN.

38. KA9Q NOS - Executables and documentation for KA9Q's NOS version of TCP/IP software, with enhancements by Gerard van der Griten, PA0GRI, Johan Reinalda, WG7J, and James Dugal, N5KNX.

39/39A KA9Q NOS - Source code for Executables on Disks 38/38A.

40. SP (Eskay Packet) - Hostmode program by Sigi Kluger, DK4NB for WA8DED firmware with additional support for Baycom modems & KISS TNC's.

41. TAPR Deviation Meter - Source code & tools.

42. PCTOR by Johan Forrer, KC7WW runs AMTOR (CCIR476-6) on a PC compatible. All AMTOR modes & listen are supported. Requires external HF Modem such as CP-1, ST-6, DJ6HP or similar.

43. METCON - Source code and tools.
Orders for any of the above disks, new submissions or updates to the TAPR software library should be sent to the TAPR office.

October 1995

Original source file: tapr-bb.9510
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1995-10/TAPR-BB_1995-10.txt

1. ARLB094 Digital rules clarified

From: Greg Jones <gjones@tenet.edu>
Date: Thu, 12 Oct 1995 16:54:20 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199510122154.QAA09868@Leslie-Francis.tenet.edu>
Rendered body type: text/plain

From: w1aw@arrl.org
Organization: American Radio Relay League
Date: Thu, 12 Oct 1995 17:21:31 EDT
Message-ID: <$arlb094.1995@ampr.org>

SB QST @ ARL $ARLB094
ARLB094 Digital rules clarified

ZCZC AG61
QST de W1AW
ARRL Bulletin 94 ARLB094
>From ARRL Headquarters
Newington CT October 12, 1995
To all radio amateurs

SB QST ARL ARLB094
ARLB094 Digital rules clarified

The FCC, responding to a request from the ARRL, has clarified its rules regarding Amateur Radio stations' use of digital codes.

The ARRL, in a letter to the Commission, said that some amateurs had expressed concern about the propriety of using the CLOVER, G-TOR, and PacTOR codes on the HF bands (below 30 MHz), because FCC rule 97.309(a) ''appears to authorize'' only Baudot, AMTOR, and ASCII codes. The League told the Commission that it had worked with the developers of CLOVER, G-TOR, and PacTOR to document the technical characteristics of those codes, and asked the FCC to remove any doubt about their legality on the HF bands.

The FCC agreed, saying that the use of the three modes does not conflict with its objective of preventing the use of codes or ciphers intended to obscure the meaning of the communication.

As a result, the FCC added a paragraph (4) to Part 97.309(a) to read:

(4) An amateur station transmitting a RTTY or data emission using a digital code specified in this paragraph may use any technique whose technical characteristics have been documented publicly, such as CLOVER, G-TOR, or PacTOR, for the purpose of facilitating communications.
NNNN
/EX

2. Software library update

From: Greg Jones <gjones@tenet.edu>
Date: Fri, 13 Oct 1995 20:40:13 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199510140140.UAA13957@Leslie-Francis.tenet.edu>
Rendered body type: text/plain

According to Bob Nielsen:
Date: Fri, 13 Oct 1995 17:32:33 -0500
From: Bob Nielsen <nielsen@primenet.com>
Subject: Software library update

Tucson Amateur Packet Radio Corp.
8987-309 E Tanque Verde Rd #337
Tucson, AZ. 85749-9399
Phone: (817) 383-0000
Fax: (817) 566-2544
Internet: tapr@tapr.org

TAPR is a Non-Profit R & D Corporation

TAPR SOFTWARE LIBRARY

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Additions to the software library are always welcome, however we do request that they be submitted either by, or with the expressed permission of, the author. TAPR attempts to provide the latest versions of all software; updates are appreciated. TAPR reserves the right to screen any submissions and restrict the library content as necessary. Both freeware and shareware are acceptable. Software may be uploaded to the /tapr/software_lib/UPLOAD directory. Please read the README file in that area regarding notification of uploads to the librarian. Please direct any questions to softlib@tapr.org.

****

Current versions of disks in the TAPR software library - As of 12 October 1995

Key:

(*) Indicates two 3-1/2" disks.

Disk	Pgm Name	Version	Filename (/tapr/software_lib/xxx)
1.	APLINK	VER. 7.01	/bbs/apl701.exe
2.	AA4RE BBS	VER. 2.12	/bbs/bb212.zip
3.	CBBS	VER. 7.30	/bbs/cbbs73.zip
4.	EZPAC	VER. 1.1	/misc/ezpac11.zip
5.	MONAX		/misc/monax.zip
	PRAFFIC	VER. 2.05E	/misc/praf205e.zip
	PACKHACK	VER. 8	/misc/phack8.zip
6.	Ham Comm	VER. 3.08	/misc/hco308.zip
7.	TNC2 Manual & EPROM's	VER. 1.18A	/tnc/eproms.exe
			/tnc/hostmode.exe
			/tnc/tncdocs.exe
8.	Utilities		
	7PLUS	VER. 2.02	/utils/7plus20.exe
	LHA	VER. 2.11	/utils/lha211.exe
	PKARC	VER. 3.6	/utils/pk36.exe
	PKZIP/PKUNZIP	VER. 2.04G	/utils/pkz204g.zip
	R95	VER. 4.0	/utils/r9540.exe
	UUENCODE/UUDECODE	VER. 5.40	/utils/uuexe540.exe
	ZOO	VER. 2.10	/utils/zoo21.exe
9.	ROSERVER PRMBS	VER. 1.73	/bbs/rsvr173.zip
10.	ROSE X.25 SWITCH	VER. 3.7	/switch/rzsw37.zip
			/switch/rswd33.zip
11.	KA9Q NET	VER. K36	
	Executable and Documentation		/tcpip/netk36ex.zip
	Source Code		/tcpip/netk36sr.zip
12.	WXN Weather Svr.	VER. 5.11	/misc/wxn511.zip
13.	TNC1 CODE - TNC-2 Notes		/tnc/tnc1src.zip
			/tnc/tnc2not.zip
14.	WINLINK	VER. 1.2	/bbs/wnl12.exe
15.	WA7MBL BBS	VER. 5.14	/bbs/mbl514.zip
16.	W0RLI BBS	VER. 18.05	/bbs/rli1805.exe
17.	YAPP	VER. 2.0	/terminal/yapp.zip
18.	INTRO TO TCP/IP		/tcpip/tcpintro.zip
19.	LAN-LINK	VER. 2.32	/terminal/ll232.zip
20.	ARESDATA	VER. 1.6	/misc/aresdata.zip
21/A	MSYS	VER. 1.18	/bbs/msys118.zip
22.	G8BPQ NODE	VER. 4.08a	/switch/bpq408a.zip
23.	DELETED		
24.	THS	VER. 2.50	/terminal/ths.zip
25.	VE4UB NTS	VER. 091891	/misc/ntsve4ub.exe
26.	NM1D DOSGATE	VER. 1.14	/misc/dosgate.zip
27.	SV7AIZ BBS	VER. 4.51	/bbs/aiz451.exe
28.	TEXNET	VER. 1.6	/switch/tprs16.zip

29.	Intro to Packet Radio	6/16/95	/misc/intropkt.zip
30.	Microsat Ground-Station Software		
	PB	04/30/92	/sat/microsat.zip
	PG	02/25/92	"
	PFHADD	03/24/92	"
	PHS	12/21/90	"
31.	DELETED		
32.	PAMS	VER. 2.09	/bbs/pams209.zip
33.	TNC2 Mon. Z80		/tnc/monz80.zip
34.	GIL	VER. 1.03	/misc/gil1-03.zip
35/A	PAKET	VER. 6.1	/terminal/paket61.zip
36/A	F6FBB BBS	VER. 5.15	/bbs/f6fbb515.zip
37.	TPK	VER. 1.82	/terminal/tpk182.zip
38.	JNOS (Executables, Doc's)	VER. 1.10L	/tcpip/jnos110l.exe /tcpip/docs110l.zip
39/A	JNOS (Source for 38)	VER. 1.10L	/tcpip/jnos110l.zip
40.	SP (Eskay Packet)	VER. 6.50	/terminal/sp650.exe
41.	TAPR DevMeter source & tools		/misc/devmtr.zip
42.	PCTOR	VER. 3.02	/terminal/pctor302.zip
43.	METCON source & tools	VER. 1.07	/misc/metcon.zip

The following is a brief description of the current listings in the TAPR software library.

1. APLINK - A concurrent AMTOR MBO and packet BBS system by Victor D. Poor, W5SMM.

2. BB - A multiconnect packet mailbox program by Roy Engehausen, AA4RE. Requires the use of AEA or WA8DED host mode or G8BPQ switch software for operation.

3. C-BBS - Packet BBS program written in C language. Originally written by Hank Oredson, W0RLI, current version by K3RLI and AG3F.

4. EZPAC11 - A menu-driven NTS message formatter by Mike Imel. Disk also contains a copy of WA7MBL's YAPP terminal program.

5. MONAX (NK6K & WB6YMH), PRAFFIC (IW3FQG) and PACKHACK (K7EA) - Programs for monitoring a packet radio channel and gathering system statistics.

6. Ham Comm - A DSP RTTY program with VGA spectrum display, oscilloscope, tuning indicator, all real time. Uses simple 1 chip interface, schematic included, all parts available at Radio Shack. Powered by serial port.

7. Manual and EPROM's for TAPR TNC2
Assembly & operating manuals for TAPR TNC-2 plus EPROM images for 1.1.8a firmware, KISS & state machine

8. Utility programs for Binary-to-ASCII conversion and file compression.

9. ROSERVER/PRMBS - A packet radio BBS with telephone modem support by Brian Riley, KA2BQE.

10. ROSE - The ROSE switch by Tom Moulton, W2VY.

11. KA9Q NET - Executables and source code for the NET version of TCP/IP by Phil Karn, KA9Q, with enhancements by Joe Buswell, K5JB.

12. WXN Weather Server - A multi-user weather server that runs as an application on the G8BPQ switch. Uses the Heath ID-5001 Advanced Weather Computer for weather data. Includes PC user program that runs on a TNC2.

13. TNC-1 source code - Source for the TAPR TNC-1 firmware, TNC-2 Notes.

14. WINLINK - A BBS system for AMTOR, PACTOR, CLOVER and packet by Vic Poor, W5SMM and Hans Kessler, N8PGR.

15. WA7MBL BBS - Packet BBS system by Jeff Jacobsen, WA7MBL.

16. W0RLI BBS - Packet BBS system by Hank Oredson, W0RLI.

17. YAPP - A packet terminal program by Jeff Jacobsen, WA7MBL. Supports split-screen operation, ASCII and binary file transfer.

18. INTRO TO TCP/IP - Much descriptive and reference information on TCP/IP.

19. LAN-LINK - Packet terminal program by Joe Kasser, G3ZCZ. Also supports the non-packet modes of PK-232, KAM and MFJ-1278.

20. ARES/Data - A packet radio data base system for emergencies by Weo Moerner, WN6I and Dave Palmer, N6KL.

21/21A MSYS - A multiconnect BBS with telephone modem, terminal, node and TCP/IP support by Mike Pechura, WA8BXN. Requires KISS mode.

22. G8BPQ NODE - A NET/ROM-compatible multiconnect software packet switch by John Wiseman, G8BPQ, which can be run standalone or in conjunction with a BBS package, ARES/Data or DX Cluster software.

23. Deleted

24. THS - A terminal program for TNCs with WA8DED firmware or the DRSI PC*PA by Peter Heinrich, HB9CVV.

25. NTS traffic generator - A software package for generating NTS traffic by Bill Bowman, VE4UB.

26. NM1D DOSgate - A program allowing remote operation of a PC via packet radio by Rich Bono, NM1D.

27. SV7AIZ BBS - a multiuser, multiport BBS by Spiros Kavalaris, SV7AIZ for WA8DED/AEA host, DRSI or KISS TNC running G8BPQ switch.

28. TEXNET Applications - Software for use with the TEXNET switch by Texas Packet Radio Society.

29. INTRO TO PACKET RADIO - A tutorial on Packet Radio by Larry Kenney, WB9LOZ.

30. MICROSAT Ground Station Software - Programs and information for use with the MicroSats (AO-15, DO-17, WO-18 and LO-19) as well as UO-14 by Harold Price, NK6K and Jeff Ward, G0/K8KA.

31. deleted

32. PAMS - A Personal AMTOR Mailbox System by Victor D. Poor, W5SMM.

33. TNC-2 Monitor - A Z-80 monitor for the TNC-2 and clones by Paul Newland, AD7I.

34. GIL - Graphics Interchange Language - Permits a convenient way to transmit more than just ASCII text messages, such as animated graphics drawings or diagrams over digital radio links.

35/35A PAKET - A TNC-2 program with features such as windowed operation for multi-connects by Tony Lonsdale, VK2DHU.

36/36A F6FBB BBS - Supports 15 languages, YAPP support, multiconnects, compressed message forwards.

37. TPK - French language terminal program with many features by Gerard Regnard, F1EBN.

38. KA9Q NOS - Executables and documentation for KA9Q's NOS version of TCP/IP software, with enhancements by Gerard van der Griten, PA0GRI, Johan Reinalda, WG7J, and James Dugal, N5KNX.

39/39A KA9Q NOS - Source code for Executables on Disks 38/38A.

40. SP (Eskay Packet) - Hostmode program by Sigi Kluger, DK4NB for WA8DED firmware with additional support for Baycom modems & KISS TNC's.

41. TAPR Deviation Meter - Source code & tools.

42. PCTOR by Johan Forrer, KC7WW runs AMTOR (CCIR476-6) on a PC compatible. All AMTOR modes & listen are supported. Requires external HF Modem such as CP-1, ST-6, DJ6HP or similar.
43. METCON - Source code and tools.

Orders for any of the above disks, new submissions or updates to the TAPR software library should be sent to the TAPR office.

Bob Nielsen Internet: nielsen@primenet.com
Tucson, AZ AMPRnet: w6swe@w6swe.ampr.org

http://www.primenet.com/~nielsen AX.25: w6swe@wb7tls.az.usa.noam

November 1995

Original source file: tapr-bb.9511
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1995-11/TAPR-BB_1995-11.txt

1. TAPR's NEW Virtual Meeting Page

```
From: Greg Jones <gjones@tenet.edu>
Date: Wed, 1 Nov 1995 02:54:29 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing), tapr-sys@tapr.org (TAPR SYS),
        regional_freq@tapr.org (Dan Puckett),
        0003241437@mcimail.com (Bill Pasternak),
        bstrick@Leslie-Francis.tenet.edu (Bob Stricklin N5BRG),
        mcdermot@eagle.aud.alcatel.com (Tom McDermott),
        karn@servo.qualcomm.com (Phil Karn), danp@comp.uark.edu (Dan Puckett),
        tapr-board@tapr.org (TAPR Board), psr@tapr.org (PSR),
        dsp-93@tapr.org (DSP-93 Build)
Message-ID: <199511010854.CAA10311@Leslie-Francis.tenet.edu>
Rendered body type: text/plain
```

TAPR is proud to announce the creation of a virtual meeting, workshop, and seminar page on the www.tapr.org pages.

On our new pages, TAPR uses the RealAudio system to make presentations available for a few events that many amateurs were not able to attend. TAPR is evaluating the RealAudio system, and its current implementation on the TAPR server is limited. The system only allows 6 concurrent connections, so if you find that an audio channel is busy -- try back at another time.

Please let us know what you think about this -- we really want to hear about your experience with these pages.

Currently, the virtual meeting pages include:

*** 1995 TAPR Annual Meeting, St Louis, MO.

Couldn't attend the TAPR meeting in March of 1995 ? Well - here is your opportunity to listen in to both the Sunday workshops. The TAPR/AMSAT DSP-93 Workshop by Bob Stricklin, N5BRG, and Tom McDermott, N5EG as well as a seminar on Error Control Coding by Phil Karn, KA9Q are made available. Using the Adobe Acrobat format (pdf) we have provided the overheads and between the audio and the overheads you should be able to get a lot from the workshop you couldn't attend!

*** Repeater Frequency Coordinators Meeting, Oct 7th, 1995

Hear the entire meeting of the nations repeater frequency coordinators who met with the ARRL and the FCC in St. Charles, Missouri, October 7th, 1995. Hear what was said by Rod Stafford, President of the ARRL and Ralph Haller, N4RH, Deputy Chief of the FCC's Wireless Telecommunications Bureau. Listen in on the eventual discussions, debates, and eventual outcomes. Read what Newsline published regarding the event.

*** Ham Radio and More Show, August 13th, 1995

Hear the August 13th guest, Greg Jones, WD5IVD, President of TAPR discuss digital issues and what TAPR is doing.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org web: http://www.tapr.org

---

2. New Page added to TAPR SS Web Pages

```
From: Greg Jones <gjones@tenet.edu>
Date: Sat, 4 Nov 1995 01:29:59 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing), tapr-sys@tapr.org (TAPR SYS),
        pcs@tapr.org (TAPR PCS Project)
```

Message-ID: <199511040729.BAA08398@francis.tenet.edu>
Rendered body type: text/plain

Amateur Spread Spectrum Web Page

A new article by Dewayne Hendricks, WA8DZP, now appears on the Amateur
Radio Spread Spectrum Web Pages. The article appears in the next PSR and
covers current issues on Amateur Spread Spectrum.

Keep an eye on the Amateur SS Web page as issues and technology develop.

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e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org web: http://www.tapr.org/tapr

3. TAPR Web Update

From: Greg Jones <wd5ivd@tapr.org>
Date: Sun, 12 Nov 1995 08:19:21 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199511121419.IAA20440@sys1.tapr.org>
Rendered body type: text/plain

* New on the SS Web Page http://www.tapr.org/ss

Presentation by Karn, Phil, KA9Q concerning Spread Specturm at the ARRL
Southwestern Division Convention in Long Beach in early September 1995.
(karn.ss.longbeach.95.pdf [36K])

* New on the TAPR Web Page http://www.tapr.org

DTMF Accessory Squelch (DAS) page and information. The DAS will appear in
the December QST. Paul Newland, AD7I, is the designer.

* Virtual Meeting Pages

The realdaudio pages are getting a lot of access. If you haven't checked
out the meeting pages...please do so.

http://www.tapr.org/tapr/html/virtual.html

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e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org web: http://www.tapr.org/tapr

4. Old TAPR Internet address gone

From: Greg Jones <wd5ivd@tapr.org>
Date: Fri, 17 Nov 1995 15:40:07 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199511172140.PAA15149@sys1.tapr.org>
Rendered body type: text/plain

The old Internet address of "dingus.n5lyt.datapoint.com" has been deleted.
There are still WWW pages out there that use this name in their links.

We have been tracking many of them down and asking the maintainers to change
them to "www.tapr.org", but we are sure there are many that have been missed.

Please pass the word -- and if you find something using the old address,
please correct it or inform those who maintain the site to correct it.

Cheers - TAPR

5. TAPR.ORG down Sunday

From: Greg Jones <wd5ivd@tapr.org>
Date: Sat, 18 Nov 1995 02:29:14 -0600 (CST)

To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199511180829.CAA02396@sys1.tapr.org>
Rendered body type: text/plain

The TAPR system will be going down Sunday starting at 3 PM CST (2100 UTC)
to upgrade the O/S. It will most likely be down for the rest of the day as I
need to do complete backups before I start, and they take a while.

December 1995

Original source file: tapr-bb.9512
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1995-12/TAPR-BB_1995-12.txt

1. New Page on the www.tapr.org/ss

From: Greg Jones <wd5ivd@tapr.org>
Date: Fri, 1 Dec 1995 00:36:50 -0600 (CST)
To: ss@tapr.org, tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199512010636.AAA10376@sys1.tapr.org>
Rendered body type: text/plain

Darryl Smith, VK2TDS, has allowed us to put his Thesis Page on "A Spread Spectrum Packet Radio Network" on our the Amateur Spread Spectrum Web Page. The report was submitted in partial fulfilment of the requirements for the degree of bachelor of engineering (UTS) in Electrical Engineering. Academic Supervisor: A/Prof. Sam Reisenfeld. UNIVERSITY OF TECHNOLOGY SYDNEY, SCHOOL OF ELECTRICAL ENGINEERING

http://www.tapr.org/ss

The HTML page is a little large and we might have a split up page version later when there is some time.

Lots of good information and a whole new set of references in the document.

Cheers - Greg, WD5IVD

2. New Virtual Presenation

From: Greg Jones <wd5ivd@tapr.org>
Date: Sat, 9 Dec 1995 17:42:23 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199512092342.RAA14306@sys1.tapr.org>
Rendered body type: text/plain

New to the TAPR Web Page:

Listen in on a classic TAPR presentation concerning the TAPR Beta and TNC-1 held during the first years of the TAPR organization. This presentation was video taped by Chuck Green, N0ADI, Lyle Johnson, WA7GXD, and Den Connors, KD2S in 1982 for a later SLAPR meeting and is being made available via the RealAudio system. A real treat to listen in on the founders of TAPR talk about the new technology. Check out this audio presentation.

http://www.tapr.org

Tucson Amateur Packet Radio
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---
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org web: http://www.tapr.org
---

3. Meteor Scatter test 14 Dec

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 12 Dec 1995 00:48:10 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199512120648.AAA02905@sys1.tapr.org>
Rendered body type: text/plain

Forwarded message:
Date: Mon, 11 Dec 1995 20:21:53 -0600 (CST)
From: Bob Bruninga <bruninga@nadn.navy.mil>
To: aprssig@tapr.org
Subject: [APRSSIG:5091] Meteor Scatter test 14 Dec

The nationwide 2m and 6m packet meteor scatter test will begin at 0000 UTC on 14 Dec, the evening of Wednesday, 13 Dec. All packet stations are invited to participate. For more info see the Dec QST column by Stan Horzepa. We will use 50.62 and 145.79 IF AVAILABLE in your area.

If you are going to use the Meteor Scatter mode in APRS, please note the following caution/addendum: In APRS versions prior to APRS74e, I miss-

counted the 4 sections of the US. In the menu I numbered them 1 to 4,
but in the code, they are numbered 0 to 3. Use the following table to
figure out what you need to do to transmit on the right schedule...

SECTOR OF USA	APRS74b MENU	SECTOR TO ENTER	SECTOR TO ENTER IF USING APRS74e
NE	1	0	1
SE	2	1	2
SW	3	2	3
NW	4	3	4

The version 74e will be posted on 12 Dec.

READ APRS\README\METEOR.txt for details...

REMINDERS: EVERYONE MONITOR!
            Do NOT transmit unless you have a BEAM and plenty of power
            APRS will schedule all transmissions IF your CLOCK is correct
                 and IF you have selected the right SECTOR.
            If you live near the 39th latitude or 96th longitude, then
                 everyone in your area should agree on which sector to use.
            Choose your sector based on where you ARE, but also consider
                 where your beam is pointed and when your target area is
                 transmitting.
What this means is, if you are in mississippi, dont beam SE, because
everyone to your SE will be transmitting when you are, so no one will
hear you! Always point to one of the other three quadrants.

4. TAPR Spread Specturm SIG

From: Greg Jones <wd5ivd@tapr.org>
Date: Sat, 30 Dec 1995 13:36:37 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Cc: bm@hydra.carleton.CA (Barry McLarnon VE3JF)
Message-ID: <199512301936.NAA14250@sys1.tapr.org>
Rendered body type: text/plain

TAPR is proud to introduce a new Special Interest Group which will be
focusing on Spread Spectrum Technology and Development in the Amateur Radio
Community. Barry McLarnon, VE3JF, is heading up this SIG effort.
It is hoped that this list will allow amateurs who are already using SS
devices to share what their work is and what works and does not work.

The SS mailing list is for the discussion of topics related to the
application of spread spectrum communications technology to amateur packet
radio. The emphasis of this SIG is on the technology of spread
spectrum rather than regulatory or political issues. Suitable topics
include:

- New SS chipsets and modem products, and their applicability to the
  amateur service

- Performance reports on existing products (e.g., Part 15 WLAN devices)

- Relative merits of direct sequence, frequency hopping and hybrid
  approaches in amateur SS applications

- Use of CDMA and other multiple access techniques to build packet radio
  LANs/MANs

- Dealing with shared allocations and interference in the UHF and higher
  amateur bands

- Proposals for development projects in amateur packet SS

- Sources of SS information on the Internet and elsewhere: books,
  articles, web pages, FAQ files, etc

The TAPR SS SIG is unmoderated. We would like to keep it that way, to
encourage the open exchange of ideas and minimize the turnaround time.
This will only be possible if the participants exercise some restraint.
Discussions of technical issues can get heated at times, but they are not
useful unless they also shed some light on the topic. Personal attacks
will not be tolerated, and may result in the offender(s) being summarily
removed from the list.

To subscribe to this mailing list send a message to `listserv@tapr.org` with
the following line in the body of the message:

```
subscribe ss FirstName LastName

Example:
subscribe ss J.Q. Ham

In addition the TAPR web page (www.tapr.org, under Sigs) can be used to
subscribe and unsubscribe from various TAPR mailing lists.
```

5. New NetSIG Moderator/Chairperson (fwd)

```
From: Greg Jones <wd5ivd@tapr.org>
Date: Sun, 31 Dec 1995 12:59:09 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199512311859.MAA01883@sys1.tapr.org>
Rendered body type: text/plain
```

```
Forwarded message:
Subject: New NetSIG Moderator/Chairperson
To: netsig@tapr.org
Date: Sun, 31 Dec 1995 10:30:46 -0500 (EST)
From: jra@ag9v.ampr.org

I'm pleased to announce that Steve Stroh, N8GNJ (strohs@halcyon.com), is
the new NetSIG moderator and chairperson.

Though I've cleverly timed this announcement for the new year, Steve has
actually been doing the job for a couple of months, and doing it very well.

Steve is very active in both network building and tcp/ip in the Seattle area,
and he's been a great contributor to NetSIG.

There are a couple of reasons for this change.  Primarily, I have too many
other projects for TAPR and my local group (not to mention my family and
employer!) to give NetSIG the time it needs.  But I think there's also value
in change; NetSIG is going on two years old and it could use new ideas and
perspectives to keep it lively.  I'll be remaining on as backup to Steve.

Please join me in welcoming Steve to his new role.

73,
John
--
John Ackermann   AG9V
Internet:  jra@ag9v.ampr.org
Packet:    AG9V@N8ACV.#DAY.OH.USA
```

January 1996

Original source file: tapr-bb.9601
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1996-01/TAPR-BB_1996-01.txt

1. Official Comments (NOAM) (from BBS SIGS)

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 2 Jan 1996 21:03:11 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199601030303.VAA16299@sys1.tapr.org>
Rendered body type: text/plain

SB SYSOP@WW < WA0RJT $TAPR_123095
TAPR Recommendation of NOAM, EURO, etc.

The following are some general comments on the recommendation for
4 letter continent designators.

Regarding TAPR:

TAPR brought forward this recommendation in an attempt to bring
some organization to the BBS Sysops and to bring closure to the
discussion. In the absence of a formal organization with
procedures for resolving such issues, TAPR was providing
leadership and trying to a achieve consensus.

TAPR is accused of being arrogant and imperialistic. That really
isn't the case, even if it may be a perception. In the sense the
TAPR is perceived to "speak for the US", exactly who speaks for
Europe?

In 1994, TAPR mailed a letter to a list of over 1800 U.S. Sysops.
Among other things, the letter referred to the NOAM
recommendation. The Sysop list was compiled from packet message
headers.

TAPR provides a number of free services to Sysops, such as
maintaining a list of regional organizations which support
digital modes and operating the BBSSIG listserver on Internet..
Both the recommendation and regional organization list can be
accessed on the Internet at ftp.tapr.org or www.tapr.org. If you
want this information via packet, please send me a message.

Regarding the discussion:

The recommendation was not created in a vacuum. A heated
discussion took place for over a year. It was conducted on
packet, on Internet and in public meetings such as BBSSIG
meetings at Dayton. This was an ad hoc discussion, not something
TAPR started.

The original discussion was primarily NO vs. NOAM and had little
participation from Europe. When the recommendation was made, it
included 4 letter designators for all continents. Now, Europe is
becoming more aware of the recommendation and their discussion of
it is quite understandable.

The most cited reference for the 4 letter continent designator is
the work of Tom Clark W3IWI published in the Proceedings of the
ARRL 9th Computer Networking Conference (1990). This constitutes
prima facie evidence of the discussion now going on for 5 years!
W0RLI pointed out a reference to this discussion in 1987 at the
TAPR annual meeting.

Regarding the "standard":

Although it is widely accepted, there is NO document establishing
a standard of NA, EU, etc., The argument that TAPR is not
empowered to change NA to NOAM is invalid, since there is nothing
to "change".

If you read the recommendation, you will see that it suggests the
format x.3.4 where:
     x = a local identifier of unspecified length,
     3 = the country code in 3 character format,
     4 = the continent code in 4 character format.

A substantial number of details for BBS interoperability have
been agreed to by the BBS authors. Sysops usually have little or
no visibility of this, but benefit substantially from the
"standard". In fact, this is more of a working agreement rather
than a standard. While forwarding features require an agreement
between a few individuals, BBS specific implementation require
cooperation between all Sysops.

The TAPR recommendation is just that, a RECOMMENDATION! It is
intended to benefit the digital community. Those who chose to
accept the recommendation, thank you. To those who chose not to,
please attempt to evaluate the recommendation on its merits.

As Chairman of the TAPR BBSSIG, I welcome the discussion of this
and any other issue affecting Sysops, provided the comments are
factual and not personal attacks.

Barry Buelow WA0RJT
TAPR BBSSIG

PACKET: WA0RJT@WA0RJT.IA.USA.NOAM
INTERNET: BARRY@IA.NET

/EX

2. Another TAPR/AMSAT DSP-93 run

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 16 Jan 1996 01:54:49 -0600 (CST)
To: dsp-93@tapr.org (DSP-93 Build), amsat-bb@amsat.org (AMSAT BB Mail Group),
        tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199601160754.BAA16338@sys1.tapr.org>
Rendered body type: text/plain

DSP-93   The TAPR/AMSAT Joint DSP Program

Announcement of Spring Kit Sales

TAPR is now taking orders until March 1st, 1996 for the next DSP-93 kit
production.

Full information can be found on www.tapr.org or in ftp.tapr.org/tapr/dsp93.
Software and documentation can be previewed at either of these locations.

In addition, a DSP-93 e-mail list is maintained and questions regarding the
unit can be asked there. You can use the TAPR web page to subscribe or send
e-mail to listserv@tapr.org and in the message body write subscribe dsp-93
YourFullName.

Please pass the word so that we can fullfill the entire order for the
Spring.

Ordering your Kit

The DSP-93 will sell for $430 as a complete kit, including enclosure and
power supply. If you are in a country that can not use the 110V supply,
$420 will purchase the unit without supply.

TAPR kits can be complex depending on the kitting experience of each
builder. We donUt think you will have trouble with the DSP-93 kit, but it
does require some knowledge and experience to successfully go from a kit to
a finished, usable unit, depending on the mode of operations. For data
radio applications (i.e. 9600 baud FSK), special modifications must be made
to your radio for proper operation of the DSP-93. Unlike other TAPR kits in
the past, only the interface to the radio and the serial cable to the
computer (DB-9) will be the responsibility of the kit builder. All other
parts will be in the kit ready for complete assembly.

On a positive note, the TAPR TNC-95 (for use with the DSP-93) is gaining
closure and should be available around the time of this next shipment of
DSP-93 kits. Also, Paccomm now offers a TNC for usage inside the TAPR/AMSAT
DSP-93.

Due to the cost per-unit of the DSP-93, TAPR and AMSAT are unable to fund
the total purchasing of inventory that may sit idle on the shelf for months.
TAPR and AMSAT are requiring that kit purchasers provide VISA/MC information
or checks/money orders with their initial purchases. Money for the initial
kit purchase will be deposited upon receipt to cover kitting costs, with

kits being shipped during the Spring of 1996.

Orders can be mailed to the TAPR address: 8987-309 E. Tanque Verde Rd #337,
Tucson, Az, 85749-9399, call (817) 383-0000 (Office Hours: Tue-Fri,
9am-12noon, 3pm-5pm Central Time), fax (817) 566-2544, tapr@tapr.org,
www.tapr.org. If you have questions concerning the unit, please write or
call TAPR for an information pamphlet.

Note to TAPR members: Since this is a joint project, this kit will not have
a membership discount attached.

References
Stricklin, Bob. (1994). TAPR/AMSAT Joint DSP Project: DSP-93.
Proceedings of the TAPRJ1994 Annual Meeting. Tucson Amateur Packet Radio
Corp.

Stricklin, Bob and Greg Jones. (1993). TAPR/AMSAT DSP-93 Project.
Proceedings of the 1993 AMSAT-NA. AMSAT.

Stricklin, Bob. (1993). DSP-93: The Joint DSP Program (TAPR/AMSAT). Issue
#52, Fall 1993, Packet Status Register. pp. 4-5. Tucson Amateur Packet
Radio Corp.

3. Returned mail: Service unavailable

From: errorMail not sent:return-address.to@rrz.debis.LOCAL.unknown@str.daimler-benz.com
Date: sender
To: <tapr-bb@tapr.org>
Message-ID: reply-to
Rendered body type: text/plain

----- Transcript of session follows -----
Connected to uts66:
>>> HELO syssun7.rrz.debis.str.daimler-benz.com
<<< 553 syssun7.rrz.debis.str.daimler-benz.com host name configuration error
554 <e1e05@uts66>... Service unavailable

   ----- Unsent message follows -----
Received: from syssun8.rrz.debis.str.daimler-benz.com by syssun7.rrz.debis.str.daimler-benz.com
(5.0/SMI-SVR4)
        id AA20674; Tue, 16 Jan 1996 09:16:17 --100
Errors-To: <tapr-bb@tapr.org>
Received: from sys1.tapr.org by syssun8.rrz.debis.str.daimler-benz.com (5.0/SMI-SVR4)
        id AA03580; Tue, 16 Jan 1996 09:12:16 --100
Received: from sys1.tapr.org (localhost [127.0.0.1]) by sys1.tapr.org (8.7.2/8.7.2) with SMTP id
CAA16865; Tue, 16 Jan 1996 02:11:37 -0600 (CST)
Date: Tue, 16 Jan 1996 02:11:37 -0600 (CST)
Message-Id: <199601160754.BAA16338@sys1.tapr.org>
Reply-To: tapr-bb@tapr.org
Originator: tapr-bb@tapr.org
Sender: tapr-bb@tapr.org
Precedence: bulk
From: Greg Jones <wd5ivd@tapr.org>
To: tapr-bb@tapr.org
Subject: [TAPR-BB:139] Another TAPR/AMSAT DSP-93 run
X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
X-Comment: Tucson Amateur Packet Radio Announcements
Content-Type: text
X-Mailer: ELM [version 2.4 PL25]
Content-Length: 3028

DSP-93   The TAPR/AMSAT Joint DSP Program

Announcement of Spring Kit Sales

TAPR is now taking orders until March 1st, 1996 for the next DSP-93 kit
production.

Full information can be found on www.tapr.org or in ftp.tapr.org/tapr/dsp93.
Software and documentation can be previewed at either of these locations.

In addition, a DSP-93 e-mail list is maintained and questions regarding the
unit can be asked there. You can use the TAPR web page to subscribe or send
e-mail to listserv@tapr.org and in the message body write subscribe dsp-93
YourFullName.

Please pass the word so that we can fullfill the entire order for the
Spring.

Ordering your Kit

The DSP-93 will sell for $430 as a complete kit, including enclosure and power supply. If you are in a country that can not use the 110V supply, $420 will purchase the unit without supply.

TAPR kits can be complex depending on the kitting experience of each builder. We donUt think you will have trouble with the DSP-93 kit, but it does require some knowledge and experience to successfully go from a kit to a finished, usable unit, depending on the mode of operations. For data radio applications (i.e. 9600 baud FSK), special modifications must be made to your radio for proper operation of the DSP-93. Unlike other TAPR kits in the past, only the interface to the radio and the serial cable to the computer (DB-9) will be the responsibility of the kit builder. All other parts will be in the kit ready for complete assembly.

On a positive note, the TAPR TNC-95 (for use with the DSP-93) is gaining closure and should be available around the time of this next shipment of DSP-93 kits. Also, Paccomm now offers a TNC for usage inside the TAPR/AMSAT DSP-93.

Due to the cost per-unit of the DSP-93, TAPR and AMSAT are unable to fund the total purchasing of inventory that may sit idle on the shelf for months. TAPR and AMSAT are requiring that kit purchasers provide VISA/MC information or checks/money orders with their initial purchases. Money for the initial kit purchase will be deposited upon receipt to cover kitting costs, with kits being shipped during the Spring of 1996.

Orders can be mailed to the TAPR address: 8987-309 E. Tanque Verde Rd #337, Tucson, Az, 85749-9399, call (817) 383-0000 (Office Hours: Tue-Fri, 9am-12noon, 3pm-5pm Central Time), fax (817) 566-2544, tapr@tapr.org, www.tapr.org. If you have questions concerning the unit, please write or call TAPR for an information pamphlet.

Note to TAPR members: Since this is a joint project, this kit will not have a membership discount attached.

References

Stricklin, Bob. (1994). TAPR/AMSAT Joint DSP Project: DSP-93. Proceedings of the TAPRJ1994 Annual Meeting. Tucson Amateur Packet Radio Corp.

Stricklin, Bob and Greg Jones. (1993). TAPR/AMSAT DSP-93 Project. Proceedings of the 1993 AMSAT-NA. AMSAT.

Stricklin, Bob. (1993). DSP-93: The Joint DSP Program (TAPR/AMSAT). Issue #52, Fall 1993, Packet Status Register. pp. 4-5. Tucson Amateur Packet Radio Corp.

4. TAPR.ORG UPdate

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 30 Jan 1996 17:10:25 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Cc: wd5ivd@tapr.org (Greg Jones)
Message-ID: <199601302310.RAA24054@tapr.org>
Rendered body type: text/plain

TAPR.ORG system performance and DNS issues

Several people have reported problems accessing TAPR.ORG over the past few weeks. We are aware of the problems and have been working on relocating the site to a faster connection for some months now. Currently TAPR.ORG sits at the end of an ISDN line. We hope to be moving to a T1 or faster connection shortly.

TAPR.ORG has been a great success and is one reason for our current bottleneck in bandwidth. We apologize for any delays and connect problems you might have had and can only suggest you stick with it until we improve our operational network speed.

To help decrease the current network load on TAPR.ORG, the APRS software library has been moved to: ftp://aprs.rutgers.edu/pub/hamradio/aprs/
We would like to thank Keith and Mark Sproul for hosting the APRS software library at their site. This should help them manage the APRS library better and provide better access to all involved. Once the network issues have

been resolved on TAPR.ORG we will begin to mirror the site.

The IP address for the system was changed two weeks ago and if you have
problems getting into the system using tapr.org by itself, you can always
use ftp.tapr.org or sys1.tapr.org for access. The tapr.org issue should be
cleared up in the coming days as DNS systems update.

In addition, several things have been added in the past month to tapr.org

Two new mailing lists:
        APRSwin APRS Windows
        SS   Amateur Spread Spectrum

Also, a new RealAudio section featuring Newsline, Ham Radio and More, and
the RAIN report are under construction. Keep an eye out on the TAPR.ORG
home page for a link to these shortly. As well as a TNC-95 page that
details the alpha test of the TNC-95.

If you have comments or suggestions about TAPR.ORG, please let us know.

Cheers - Greg, WD5IVD
President, TAPR

5. TAPR.ORP IP

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 30 Jan 1996 20:17:06 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199601310217.UAA05340@tapr.org>
Rendered body type: text/plain

Someone has pointed that I should have posted the IP address for TAPR.ORG.
It is now: 206.210.220.85

Cheers - Greg

February 1996

Original source file: tapr-bb.9602
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1996-02/TAPR-BB_1996-02.txt

1. System down Sunday 2/11/96

```
From: Greg Jones <wd5ivd@tapr.org>
Date: Sat, 10 Feb 1996 00:48:58 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199602100648.AAA22243@tapr.org>
Rendered body type: text/plain
```

TAPR.ORG will be down for several hours starting 3pm on Sunday for a BSD/OS upgrade.

---

2. NEW TAPR AUDIO WEB PAGE

```
From: Greg Jones <wd5ivd@tapr.org>
Date: Sun, 18 Feb 1996 06:05:53 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199602181205.GAA05018@tapr.org>
Rendered body type: text/plain
```

TAPR makes available Amateur Radio News Services on the Internet.
Feb 18, 1996

TAPR is proud to announce the creation a new set of web pages that focus on Amateur Radio News Services. This page can be reached from the tapr home page http://www.tapr.org

This new page contains audio from Amateur Radio Newsline, the RAIN Report (Radio Amateur Information Network), and Ham Radio and More. All audio is provided by the RealAudio system. RealAudio players are available for Mac, Windows, and UNIX based computers. We are currently only encoding for 14.4Kbps access speeds, to lower the consumption of our hard drive space. We will be looking at doing more 28.8Kbps+ speed access encoding later in the year.

These audio pages will be updated in different manners. Newsline is updated each week. The RAIN report is a monthly service. Shows from the national hour of Ham Radio and More are being made available on a 'best of' selection.

TAPR hopes that this page will help make these amateur radio news programs more readily available to the amateur community.

The Ham Radio and More 'Best of' currently includes:
   * Bob Bruninga, WB4APR, Author of APRS
   * Greg Jones, WD5IVD, President TAPR
   * Dan Meredith, N7MRP (Packet, the Internet, and more!)
   * Phil Karn, KA9Q (TCP/IP and Spread Spectrum)
   * Dick Daniels, W4PUJ (Phase 3D and AMSAT)
   * Lyle Johnson, WA7GXD (Packet Radio)
   * Lew McFadin, W5DID (SAREX Project)
   * Jack Tiley, N7RWJ (Spread Spectrum Communications)
   * Lyle Johnson, WA7GXD (History of Packet Radio and TAPR)

With more to be added in the coming months!

You might note the slight bias towards digital topics :-) This will change as we add more programs.

NOTE: TAPR is currently only supporting 5 audio channels currently. If you get a busy connect, just try again at a later time.

VOLUNTEER? We are looking for people who might be interested in setting up a rotation for doing the Newsline encoding. If you think you might like to help record and then encode the weekly Newsline feed for the page, please contact TAPR@TAPR.ORG and let us know. Having a rotation should make it easier to keep this page current.

March 1996

Original source file: tapr-bb.9603
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1996-03/TAPR-BB_1996-03.txt

1. TAPR files its comments on RM-8737

From: Greg Jones <wd5ivd@tapr.org>
Date: Sat, 2 Mar 1996 01:45:22 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199603020745.BAA15862@tapr.org>
Rendered body type: text/plain

TAPR files its comments on RM-8737.

If you would like to read the initial filing as well as other comments, they are available on http://www.tapr.or/ss TAPR will be keeping the Amateur Spread Spectrum page as accurate as possible during the FCC process.

In addition, the Spread Spectrum Special Interest group has had some very interesting discussion regarding current technology, so feel free to join them by subscribing to the list. Joining can be done from the SIG web page on www.tapr.org -- or send e-mail to listserv@tapr.org and in the message body state 'subscribe ss YourName Call'.

TAPR will continue to be active on this rule making in the coming months.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Part 97 of the	)	RM-8737
Commission's Rules Governing	)	
the Amateur Radio Service to	)	
Facilitate Spread Spectrum	)	
Communications	)	

To: The Commission

COMMENTS OF TUCSON AMATEUR PACKET RADIO CORPORATION

Tucson Amateur Packet Radio
Corporation
8987-309 E Tanque Verde Rd #337
Tucson, Arizona 85749-9399
(817) 383-0000

February 26, 1996

The Tucson Amateur Packet Radio Corporation ("TAPR") submits these comments in response to the above-referenced petition for rule making (the "Petition") filed by the American Radio Relay League, Incorporated ("ARRL").

BACKGROUND AND STATEMENT OF INTEREST

TAPR is a non-profit (501(c)(3)) scientific and educational organization with more than 2,500 members worldwide. It is chartered to engage in three principal activities: scientific testing and research into the development and improvement of technological systems for use in the amateur radio service including, but not limited to, digital packet radio communications; research and testing of systems, hardware, and software for packet radio local area networks and computer network systems; and disseminating to the public the information obtained as a result of such research and testing.

TAPR was founded in 1982 as a national organization with interests in the

areas of packet and digital communications. It grew out of a 1981 effort to design a packet radio Terminal Node Controller, or "TNC," that would be available to amateurs at a modest cost. From these initial designs emerged what is now the de facto standard in amateur and many commercial packet radio operations.

Today, TAPR continues as an international, membership-supported research and development organization for the amateur radio community. TAPR continues to develop new communications technology, provide kits for the amateur community, and promote the advancement of the amateur art through publications, meetings, and communications standards. TAPR also maintains a web site (http://www.tapr.org), which includes a page specifically addressing current amateur spread spectrum issues (http://www.tapr.org/ss).

DISCUSSION

TAPR generally supports the recommendations made by the ARRL in its Petition. Spread Spectrum ("SS") technology has not made great advances in the amateur radio service since it was first permitted in 1985, in part due to the fact that, by today's standards, the Part 97 regulations on amateur spread spectrum are extremely restrictive. In particular, the small number of fixed spreading codes permitted under Section 97.311(d)(1) inhibits the use and development of SS by amateur radio stations. TAPR believes that it is in the public interest, and in the interest of the amateur radio service, to change the rules for SS in order to accelerate the adoption of SS by the general amateur community.

TAPR also supports many of the specific recommendations made by the ARRL. First, TAPR supports the ARRL's request to modify Part 97.311(b) as it pertains to the unintentional triggering of repeater inputs. This section is redundant with other parts of the Commission's rules and, therefore, is unnecessary.

Second, TAPR supports the ARRL's request to delete sections 97.311(c) and (d), in order to permit SS emissions and spreading codes that are not currently authorized. Elimination of the rule that dictates specific spreading codes is necessary to facilitate further experimentation and to match the provisions allowed under an existing amateur service SS STA, discussed below. In addition, it would facilitate the use and adoption by amateur radio operators of Part 15 SS equipment and hardware.

Third, TAPR supports the ARRL's proposed change to 97.311(g), which would provide for automatic transmitter power control to limit the output power of an SS station to that which is required for communication, when more than one watt of output power is used. TAPR, however, differs with the ARRL as to just how simple this requirement would be to implement technically. While TAPR agrees that technically it is simple to control the output power of a transmitter, it is quite another matter to make this control automatic and foolproof. If the Commission decides to proceed with this particular change to the rules, it should phase the change in over some reasonable period of time, in order to give the amateur community the opportunity to develop and deploy SS equipment that properly can meet this requirement.

While, as noted above, TAPR agrees with many of the ARRL's recommendations, it disagrees with a few of the proposals contained in the Petition.

In particular, TAPR differs with the ARRL with respect to the question of which frequencies should be authorized for SS emissions. In the Petition, the ARRL proposes that brief test transmissions of SS emissions be permitted only on those frequency bands in which SS emissions currently are authorized. TAPR believes that SS emissions should be allowed on all frequency bands covered by the SS STA currently held by Mr. Robert Buaas K6KGS (6m and 2m, in addition to the frequency bands currently authorized by Part 97). In addition, the Commission should allow SS emissions in the 219-210 MHz band, which was authorized for use by the amateur radio service after the Buaas SS STA was originally granted in 1992. Finally, the Commission should not impose any restriction on the length of time SS emissions are transmitted. Ample time already has been provided for the experimental phase of SS usage in the amateur service (five years of experimentation under the 1980 AMRAD STA and ten years under the current Part 97 rules), and it is now time to allow SS use without restriction.

TAPR also differs with the ARRL as to how station identification and documentation should be handled under a revised set of rules. The ARRL in its petition did not ask the Commission to delete sections 97.311(e) and 97.119(b)(5) of the rules, even though it questioned the practicality of the requirements set forth in these sections. TAPR, in contrast, recommends that the Commission delete these subsections of the rules. The interference and harm to the band in which an SS station is operating that would be caused by

a requirement to use a CW identification outweighs the benefits that would accrue for monitoring purposes from the use of the ID.

As a result, the amateur radio community should be permitted to develop an approach for handling the necessary functions of monitoring and identification. TAPR already is working on possible resolutions to this problem and in the near future will be in a position to make a proposal to the Commission on this matter.

CONCLUSION

SS technology can provide many useful benefits to the amateur radio community if its use becomes more widespread and mainstream. In order to accomplish this, however, certain changes must be made to the Commission's rules governing the use of SS in the amateur radio service. By making these changes, the Commission will create a regulatory environment that will give members of the amateur radio service enough flexibility to develop innovative equipment and hardware employing SS technology.

For these reasons, TAPR urges the Commission promptly to issue a notice of proposed rule making to facilitate spread spectrum communications in the amateur radio service, as proposed in the Petition and as modified herein.

Respectfully submitted,

THE TUCSON AMATEUR PACKET RADIO CORPORATION

8987-309 E Tanque Verde Rd #337
Tucson, Arizona 85749-9399
(817) 383-0000

By: Dewayne Hendricks

February 26, l996

2. PSR Deadline March 5th

From: Greg Jones <wd5ivd@tapr.org>
Date: Sun, 3 Mar 1996 00:38:52 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing), tapr-board@tapr.org (TAPR Board),
tapr-sys@tapr.org (TAPR SYS), bstrick@tenet.edu (Bob Stricklin N5BRG),
karn@servo.qualcomm.com (Phil Karn),
bstraup@crystal.cirrus.com (Brian Straup), tomm@tapr.org,
paul.newland@att.com (Paul Newland),
bdale@chunks.gag.com (Bdale Garbee), n7hpr@tapr.org (Steven Bible),
n5ahd@unix1.cba.taiu.edu (Robert Diersing),
llucas@tenet.edu (Larry Lucas),
hammond@camel.campbell.edu (Mark L. Hammond),
bbattles@arrl.org (Battles Brian), k3mc@wireless.com (Chiponeous Mike),
dewayne@warpspeed.com (Dewayne Hendricks), rdw@crl.com (Roy Welch),
strohs@halcyon.com (Steve Stroh),
dewayne@warpspeed.com (Dewayne Hendricks)
Message-ID: <199603030638.AAA14308@tapr.org>
Rendered body type: text/plain

PSR Deadline.

This is a reminder that the next PSR Deadline is March 15th.

If you have materials for the PSR, please e-mail them to psr@tapr.org or
send them to Bob Hansen, PO Box 1902, Elmira, NY 14902-1902

3. 1996 ARRL and TAPR Digital Communications Conference

From: Greg Jones <wd5ivd@tapr.org>
Date: Mon, 4 Mar 1996 15:12:30 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199603042112.PAA19426@tapr.org>
Rendered body type: text/plain

Press Release. Please distribute as widely as possible. http://www.tapr.org
March 1st, 1996

1996 ARRL and TAPR Digital Communications Conference
September 20-22, 1996
Seattle, Washington (minutes from SeaTac airport)

Web: http://www.tapr.org

It's that time again! Time to make your travel plans and put the finishing touches on your work for the upcoming 15th Annual ARRL and TAPR Digital Communications Conference.

The ARRL and TAPR Digital Communications Conference is an international forum for radio amateurs in digital communications, networking, and related technologies to meet, publish their work, and present new ideas and techniques for discussion. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. The Digital Communications Conference is not just for the digital expert, but for digitally-orientated amateurs of all levels of experience.

The 1996 ARRL and TAPR Digital Communications Conference will be held on September 20-22, 1996 in Seattle, Washington. This year's conference location is just minutes away from the SeaTac (Seattle/Tacoma) Airport.

Not only is the Digital Communications Conference technically stimulating, it is a weekend of fun for all who have more than a casual interest in any of the ham digital communications modes. This includes BBS operators, networkers, DX-Cluster Sysops, software writers, modem designers, and digital satellite communications enthusiasts. The ARRL and TAPR Digital Communications Conference is for all levels of digital operators -- a must conference to attend to get active on a national level. Now, more than ever, amateur radio needs this great meeting of the minds, since it is important that we demonstrate a continued need for the frequency allocations we now have by pushing forward and documenting our achievements. The ARRL and TAPR Digital Communications Conference is one of the few ways to record our accomplishments and challenge each other to do more.

A Conference for the Beginner as well

The conference is not just for the digital expert. This year's conference will again provide an entire morning with beginning and intermediate presentations on selected topics in digital communications. Some of the topics will include: APRS, Satellite Communications, TCP/IP, Digital Radio, Spread Spectrum and other introductory topics. Come to the conference and hear these topics presented by the experts! Don't miss this opportunity to listen and talk to others in this area.

Workshops

In addition to the presentation of papers on Friday and Saturday, three workshops will be held during the conference. On Friday, Keith Sproul, WU2Z, will hold a workshop on APRS packet-location software. Keith is the Chair of the TAPR APRS Special Interest Group, developer of the Macintosh and more recent co-developer of the Windows95 version of APRS, and a leader in the area of APRS technology. This is a unique opportunity to gain insight into this fast growing new digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning Satellites). On Sunday, Dewayne Hendricks, WA8DZP , will conduct a workshop focusing on "How to utilize Part 15 wireless Radios for Ham Applications." Dewayne is an expert in the area of commercial wireless systems; his company WarpSpeed Imagineering, focuses on wireless Internet connectivity. This workshop presents an opportunity to learn how Personal Communications Technology (handheld and small business wireless systems) can be used in the amateur service. A second Sunday workshop will focus on Wireless Networking using the WA4DSY 56K RF modem Technology. This workshop will focus on the technology and accessories of creating and maintaining 56K networks using the WA4DSY modem and equipment compatible with it such as routers, digital driver cards, transverters, and repeaters. Use of WA4DSY 56K equipment in the 219-220 band will also be discussed.

1st Annual ARRL and TAPR DCC Student Papers Award

ARRL and TAPR especially welcome papers from full time students to compete for the first annual student papers award. Two $500 travel awards will be given, one in each of the following categories: a) best technical/theory-oriented paper by a student, and b) best educational or

community-oriented application paper by a student. The paper should relate directly to a wireless digital communication topic (see guidelines for more information). Papers coauthored by educators or telecommunications professionals are also eligible for this award, as long as a student is the first author. First year awards have been funded through a grant by The ARRL Foundation, Inc. Deadline for receipt of finished student paper manuscript: June 11, 1996. Please note that this deadline is different than the general conference submission date. For full details and paper guidelines contact TAPR or check http://www.tapr.org.

Call for Papers

Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the Conference is not required for publication. If you know of someone who is doing great things with digital communications, be sure to personally tell them about this! Papers are due by July 23, 1996, and should be submitted to Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111 or via the Internet to lweinberg@arrl.org. Information on paper submission guidelines are available on-line (http://www.tapr.org).

Local Co-Hosts

The 1996 ARRL and TAPR Digital Communications Conference is co-hosted by the Puget Sound Amateur Radio TCP/IP Group and Boeing Employees Amateur Radio Society (BEARS).

The Puget Sound Amateur Radio TCP/IP group is an informal group involved in an ongoing project to build and expand an amateur radio digital network in the greater Puget Sound area of the Pacific Northwest US. The Washington Experimenters TCP/IP Network (WETNET) uses TCP/IP as its primary transport protocol and currently has over 250 users. WETNET is linked to other amateur radio TCP/IP networks via the Internet. The Boeing Employees Amateur Radio Society (BEARS) is a general interest amateur radio club for employees of the Boeing Company, headquartered in Seattle, Washington. The BEARS are an active amateur club, supporting radio classes, VHF/UHF repeaters, and digital communications. BEARS has been instrumental in the construction of the Evergreen Intertie, an extensive network of interconnected repeaters in the Pacific Northwest.

What can you expect during the 1996 ARRL and TAPR Digital Communications Conference ?

* A full day of papers and breakouts on Saturday for the beginner to the advanced amateur digital enthusiast.

* Three workshops
   Friday (4pm) - APRS, Conducted by Keith Sproul, WU2Z
   Sunday (8am) - How to utilize Part 15 Radios for Ham Applications,
                  Conducted by Dewayne Hendricks, WA8DZP
   Sunday (noon) - Wireless Networking using the WA4DSY 56K RF modem Technology

* The first annual Student paper session.

* A banquet with Special Guest Speaker Lyle Johnson, WA7GXD
     Lyle was one of the founders of TAPR and instrumental in
     forming many of the current aspects of Amateur Digital
     Communications. He is currently very active in building
     several digital aspects of the upcoming Phase 3D satellite.

* SIGs (Special Interest Groups) on Saturday following the banquet.

* Informal get-togethers throughout the weekend.

* A meeting facility that is perfect for this type of meeting.

* Vendor area and informal engineering discussions/demonstrations.

* An event at which the most important new developments in amateur digital communications are announced.

* Digital 'movers and shakers' from all over the world in attendance.

* Plenty of Washington State hospitality!

Conclusion

If you have attended a Digital Communications Conference in the past, just remember back to how much fun it was discussing the latest developments into the wee hours! If you have never been, then make your plans now to attend and find out how much fun the Digital Communications Conference can be.

There are few activities where the importance of your participation can be so much fun and important! What a great way to share and renew your enthusiasm for digital amateur radio! Getting together with colleagues from all over the world and bringing each other up to date on your latest work. All this, and more, for an unforgettable weekend of ham radio and digital communications. Make your travel and lodging arrangements now. We hope to see you at the ARRL and TAPR Digital Communications Conference on September 20-22!

Full information on the conference and hotel information can be obtained by contacting Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road #337, Tucson, AZ 85749-9399. Phone: (817) 383-0000. Fax: (817) 566-2544. Internet: tapr@tapr.org Web: www.tapr.org

Sincerely,
Steve Ford, WB8IMY, ARRL Conference Co-Chair
Keith Justice, KF7TP, TAPR Conference Co-Chair
Steve Stroh, N8GNJ, Local Host Liaison
Greg Jones, WD5IVD, President TAPR

Note: If you need handouts or flyers for meetings, contact TAPR about getting what you need!

Hotel Information

Conference presentations, meetings, and workshops will be held at the Quality Inn Seattle Airport, a complex co-located with the Radisson Hotel Seattle Airport. Rooms rates are $66/single-double and $76/triple. When making reservations with the hotel, be sure to indicate you are attending the ARRL and TAPR DCC conference. It is highly recommended that you book your room prior to arriving - a block of 75 rooms is reserved until September 6th, 1996. After the 75 rooms are booked, rooms will only be available in the Radisson hotel, but will be at a higher price. Be sure to book your rooms early! The hotel provides transportation to and from SeaTac Airport. You should contact the hotel to arrange airport transportation.

Quality Inn Seattle Airport (conference hotel)
17101 Pacific Highway South, Seattle, WA, 98188
(206) 246-7000, Fax (206) 246-1715

Radisson Hotel Seattle Airport (alternate hotel)
17101 Pacific Highway South, Seattle, WA, 98188
(206) 244-6000, Fax (206) 246-6835

Registration

Contact the TAPR office by Phone, Fax, or e-mail (Internet: tapr@tapr.org) to preregister or for additional meeting information. MasterCard and VISA accepted.

- Preregistration (before Sept 1st) $40.00 *

- Late Registration or at door $45.00 *

* - Conference Registration includes:
Conference Proceedings, Sessions, Meetings, and Lunch.

- Saturday Evening Dinner (Limited Space) $19.00 **
** - Dinner, Speaker: Lyle Johnson, WA7GXD, Prize Drawing

Workshops

APRS Workshop
Friday, 4pm - 7pm. Conducted by Keith Sproul, WU2Z

- Registration $15.00

How to utilize Part 15 Radios for Ham Applications Workshop, Sunday, 8:00am
- 11:00am. Dewayne Hendricks, WA8DZP

- Registration $15.00

Wireless Networking using the WA4DSY 56K RF modem Technology Workshop
Sunday, 12noon - 3pm.

- Registration $15.00

Contact TAPR to register for the DCC.
Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road #337, Tucson, AZ
85749-9399. Phone: (817) 383-0000. Fax: (817) 566-2544.
Internet: tapr@tapr.org http://www.tapr.org

4. TAPR at Dayton

From: Greg Jones <wd5ivd@tapr.org>
Date: Fri, 8 Mar 1996 18:15:56 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Cc: 0003241437@mcimail.com (Bill Pasternak),
lenwink@indirect.com (Len Winkler),
mbohnhof@pop.wwa.com (Mark T. Bohnhoff),
tapr-board@tapr.org (TAPR Board), wo5h@tapr.org (Dave Wolf TCET),
jra@ag9v.ampr.org (John Ackermann)
Message-ID: <199603090015.SAA06617@tapr.org>
Rendered body type: text/plain

TAPR Dayton Activities '96

TAPR again will be very active at this year's Hamvention. With the joining of the TAPR spring meeting with the ARRL Digital Communications Conference, TAPR Dayton activities now make up TAPR's Spring gathering. If you are attending Dayton, please take a gander at the following schedule. We have tried to improve upon last year and we believe we have. Come join us at the Digital Forum on Friday and then come have Dinner and a good time that evening at the PacketBASH.

Our booth will be in its usual place and activity around the booth is expected to be high, with the APRS SIG and the Sproul brothers showing the latest in Windows and MAC APRS at one end of the booth. It is rumored that there will be a APRS CD-ROM made available at that time. So -- if you are an APRS enthusiast, plan to stop by.

The dates for this year's Dayton Hamvention is May 17-19, 1996.

TAPR Schedule

Friday
12noon -- Exhibit Area Opens
1:00pm -- TAPR Digital Forum Begins
7:00pm -- PacketBASH
(Dinner, Prizes, SIG meetings, Banquet Speaker!)

Saturday
8am -- Exhibit Area Opens
6pm -- Exhibit Area Closes
9pm -- Informal SIG Meeting (TBD)

Sunday
8am -- Exhibit Area Opens
2pm -- Exhibit Area Closes

1996 TAPR Digital Forum (Friday)

The TAPR digital forum should be a great forum this year. If you have time at Dayton -- be sure to attend the meeting!

1:00 - 1:45pm
   * Introduction to Digital Communications
     Greg Jones, WD5IVD

1:45 - 2:30pm
   * Making 56K Operations a Reality!
     Barry McLarnon, VE3JF

2:30 - 3:15pm
   * Spread Spectrum Technology and current issues in Amateur Radio
     Phil Karn, KA9Q

3:15 - 3:45pm
   * DAS and PCON and there use in Emergency Communications
     Paul Newland, AD7I

3:45 - 4:15pm
   * BBS Issues and Trends
     Barry Buelow, WA0RJT

4:15 - 5:00pm+
   * APRS Update and SIG Meeting
     Bob Bruninga, WB4APR and Keith Sproul, WU2Z

1996 Packet Bash!

The 1996 "Packet BASH" sponsored by TAPR and the Miami Valley FM Association
will be held on Friday of the Dayton Hamvention. The BASH will be moved this
year to a very much larger site! So, if you were one of the folks that felt
it was just too crowded for dinner -- you were not alone. The reason for the
move was that TJ's Restaurant was just a little small for 1995. The event
will be held at the AT&T site in Oakwood, OH (formerly NCR). The event will
be catered and the dinning room holds about 400 people! So the more the
merrier! Dinner space will be limited, so make your reservation early for
dinner, so that the correct number of dinners can be ordered in advanced.
To make the event even better -- we can stay a lot later than at
the TJ's site last year, so we should have time for informal discussions
after dinner.

* A buffet dinner,
* a raffle for some neat prizes,
* a great program,
* and lots of fun will cost approximately $20 per person.

We hope that this will provide an opportunity for packet and digital radio
enthusiasts to have a great night out while at Hamvention.

The schedule of events for the PacketBASH is still tentative, but will look
something like this:
     1900 -- Dinner
     1945 -- Welcome
     2000 -- Keynote Address
     2030 -- Raffle
     2045 -- TAPR SIG Meetings

Talkin will be on 146.415 simplex.

For more information, send email to "packbash@ag9v.ampr.org" or stop by the
TAPR booth at Dayton for schedule and map. The maps are currently available
on http://www.tapr.org also.

Banquet tickets can be ordered from the TAPR office. Reservations made
before May 1st will have there tickets mailed to them. After
May 1st, tickets purchased will be available for pickup at the TAPR booth.
Walk-up to the event will be accommodated as best as possible. There is
limited space (in the way of food ordered) for Dinner. Amateurs who wish to
attend the speaker and discussion are asked to arrive around 2000 (8pm).

5. [TAPR-BB:149] NETROM/THE NET (fwd)

From: Greg Jones <wd5ivd@tapr.org>
Date: Sat, 9 Mar 1996 20:41:07 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199603100241.UAA25427@tapr.org>
Rendered body type: text/plain

Sender: dmedley@ix.netcom.com (David Medley)
Subject: NETROM/THE NET

I am trying to help a TAPR customer set up a node for a BBS. I need the HEX
code and editor for either NETROM or THE NET. Could somebody please tell me
where I can find this info. It must be on the WWW somewhere.
Thanks
Dave KI6QE

6. [TAPR-BB:152] RM-8737 Comments Posted to WWW.TAPR.ORG (fwd)

From: Greg Jones <wd5ivd@tapr.org>
Date: Sat, 9 Mar 1996 23:35:24 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199603100535.XAA06009@tapr.org>
Rendered body type: text/plain

Sender: "Steven R. Bible" <srbible@mindport.net>
Subject: RM-8737 Comments Posted to WWW.TAPR.ORG

Comments to RM-8737, Ammendment of Part 97 of the Commission's Rules
Governing the Amateur Radio Service to Facilitate Spread Spectrum
Communications are being posted to

   http://www.tapr.org/ss

The following comments are presently posted:

     Southern California Repeater and Remote Base Association (SCRRBA), 2/23/96
     TAPR Comments 2/26/96
     Robert A. Buaas, K6KGS 2/26/96
     National Communications System, 2/26/96
     The Indiana Repeater Council, 2/28/96
     Henry Ruh, KB9FO, Publisher, Amateur Television Quarterly, 2/28/96
     Charles M. Albert, Jr. KC6UFM, 3/4/96
     Mike Cheponis, K3MC 3/4/96

Comments from the following will be posted as time permits:

     Nels Harvey, WA9JOB, 2/20/96
     Witt Brown, WB0CJX, Frequency Coordination Chairman
          of the Mid-America Coordination Council, Inc., 2/26/96
     George Isely, WD9GIG, President
          of the Mid-America Coordination Council, Inc., 2/26/96
     The San Bernardino Microwave Society, 2/20/96
     SouthEastern Repeater Association, Inc., 2/23/96
     John Mock, KD6PAG, 2/27/96

7. TAPR Reply Comments on RM-8737

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 12 Mar 1996 20:07:21 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Cc: ss@tapr.org
Message-ID: <199603130207.UAA00168@tapr.org>
Rendered body type: text/plain

Before the
                  FEDERAL COMMUNICATIONS COMMISSION
                      Washington, D.C. 20554

In the Matter of   )
)
Amendment of Part 97 of the   )   RM-8737
Commissions Rules Governing   )
the Amateur Radio Service to   )
Facilitate Spread Spectrum   )
Communications   )

To: The Commission

REPLY COMMENTS OF TUCSON AMATEUR PACKET RADIO CORPORATION

The Tucson Amateur Packet Radio Corporation ("TAPR") submits the following
reply comments regarding the Petition for Rulemaking (the "Petition") filed
by the American Radio Relay League ("ARRL"), which proposed certain changes
in the rules governing spread spectrum operation in the Amateur Radio
Service ("ARS").

I. PERMITTING MORE WIDESPREAD SPREAD SPECTRUM OPERATION IN THE ARS WOULD SERVE THE PUBLIC INTEREST.

A number of the comments recognized the benefits that could be provided by more widespread use of spread spectrum technologies in the ARS (1). In addition to those that would accrue to ARS operators, as described in the Petition, increased use of spread spectrum in the ARS would contribute to the overall development of spread spectrum communications (2) and, as a result, would provide benefits indirectly to commercial users as well.

Expanded use of spread spectrum in the ARS also would further the Commission's objective of promoting efficient spectrum use. At the FCC's March 5, 1996 en banc hearing on spectrum policy, Paul Barens, the "father" of one of the technologies that forms the basis of the Internet, made the following statement:

> "What do we see today if we tune a spectrum analyzer or a radio receiver across most of the scarce spectrum bands? Mostly nothing. Dead air. This strongly suggests that most of our limited spectrum space is not being fully utilized and is going to waste. Specifically, with digital technology, spectrum bands can be more efficiently packed without interfering with existing services."

By increasing the ability of ARS operators to use spread spectrum technologies, the Commission would enhance their ability to use digital technologies to enhance spectrum efficiency, as recommended in the above passage. In turn, the Commission also would make it possible for the ARS better to accommodate the many new users seeking to use ARS bands, which are already congested due to the widespread use of non-digital equipment.

Although spread spectrum is not a panacea, it offers the promise of increased spectrum efficiency, reduced interference, and improved communication performance without adversely affecting other spectrum users. As a result, the Commission's rules governing spread spectrum operation should be modified to enable these technologies to flourish within the amateur service community.

II. EXPANDED SPREAD SPECTRUM OPERATIONS WILL NOT ADVERSELY AFFECT OTHER ARS OPERATIONS.

Several repeater coordinating organizations, who are responsible for the coordination of repeater operations in their regional areas of activity, filed comments opposing to the Petition. These entities generally alleged that adoption of ARRL's proposals would cause widespread interference to, and disruption of, existing operations.

The fears and concerns expressed in these comments defy the proven ability of properly designed and implemented spread spectrum systems to operate in harmony with other spectrum users, are based upon "worst-case" scenarios, and reflect a desire to maintain the status quo even at the cost of stifling new technologies and services. As a result, they should not be permitted to prevent the development of spread spectrum in the ARS.

First, as discussed by Robert Buaas, claims that spread spectrum operation will raise the noise floor ignore the fact that few real systems operate near the noise floor, and those that do would profit from applying spread spectrum technology (3).

Second, in the ten years since the Commission first allowed limited spread spectrum operation in the ARS, a great deal of work has been done to address concerns that more flexible spread spectrum operation would adversely affect other types of ARS operations. In particular, the 1991 Buaas spread spectrum STA has made it possible for experimenters to engage in widespread use of spread spectrum technologies in the amateur band allocations below 450 MHz. Notably, operation under the existing spread spectrum rules and experimentation under the spread spectrum STA have not generated substantiated claims of objectionable interference (4).

Finally, the successful operation of Part 15 spread spectrum systems provide substantial evidence of the ability of these devices to co-exist with other users. Today, millions of spread spectrum devices operating under Section 15.247 of the Commission's rules are being used to support end-user solutions in areas such as cordless phones, location monitoring devices, and local and metropolitan-area networking. These devices have been deployed across the United States without any local coordination and without any licensing by the Commission. Yet despite this flexibility and extensive use, spread spectrum Part 15 devices have almost universally operated without causing objectionable interference to other Part 15 devices or to

others operating in shared spectrum (5). This success story provides ample proof that when spread spectrum devices are properly designed, manufactured, and deployed, they can coexist successfully with many diverse applications and, in addition, can facilitate frequency reuse.

In light of this history of successful, non-interfering operation, the Commission should not permit unsubstantiated claims of potential interference to thwart the introduction and use of new spread spectrum technologies in the ARS (6).

III. SECTION 97.119(B)(5) OF THE RULES SHOULD BE DELETED, AS SUGGESTED BY NCS.

TAPR supports the suggestion made by the Manager of the National Communications System ("NCS") to delete Part 97.119 (b)(5), which deals with the requirement for CW identification. TAPR agrees that no currently available commercial equipment implements such a function, and that deletion of this requirement will act to speed the rapid adoption of this equipment into use in the ARS.

CONCLUSION

TAPR congratulates the ARRL for its forward-looking proposal to liberalize the spread spectrum rules in the ARS. ARRL's proposal, if adopted, could provide a variety of benefits to both members of the amateur service community and to the wider public.

Proposals to modify the status quo often generate opposition by those who are adequately served by it. Like the turmoil that occurred in the ARS during the transition from AM to SSB, the growing use of spread spectrum in the service will not be without incidents of disagreement and misunderstanding. For this reason, TAPR intends to use its resources during the rulemaking process to educate the ARS community on the theory, application, and practice of spread spectrum technology.

Yet while fear and opposition are understandable, they should not be permitted to stifle new developments. In light of spread spectrum's strong track record and proven benefits, unsubstantiated claims of potential interference should be discounted and the Commission should act promptly to issue a Notice of Proposed Rulemaking proposing to implement the changes sought by ARRL, modified as discussed in TAPR's earlier comments.

Respectfully submitted,

THE TUCSON AMATEUR PACKET RADIO
CORPORATION

By:

Dewayne Hendricks
Tucson Amateur Packet Radio Corporation
8987-309 E Tanque Verde Rd #337
Tucson, Arizona 85749-9399
(817) 383-0000

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(1) See, e.g., Comments of Robert A. Buaas (RBuaas CommentsS); Comments of the Manager of the National Communications System (RNCS CommentsS); Comments of John Mock; Comments of Henry B. Ruh; see also ARRL Petition.

(2) See NCS Comments at p. 3.

(3) Buaas Comments at p. 2.

(4) Buaas Comments at p. 3.

(5) See Comments of the Part 15 Coalition, PR Docket No. 93-61 (1995).

(6) TAPR believes that a program of continuing education to the ARS community on the merits and benefits of spread spectrum technology coupled with a wider use and deployment of equipment by amateurs in various applications will go a long way towards resolving the concerns of many of the commenters who have filed in opposition. TAPR intends to use its

resources to perform this function and service for the amateur radio
community in much the same fashion that it helped start the packet radio
revolution in the ARS during the mid-1980Us.

8. RM-8737 on SS Issues Updated

From: Greg Jones <wd5ivd@tapr.org>
Date: Thu, 14 Mar 1996 02:11:57 -0600 (CST)
To: ss@tapr.org, tapr-bb@tapr.org (TAPR-BB mailing),
amsat-bb@amsat.org (AMSAT BB Mail Group)
Message-ID: <199603140811.CAA06013@tapr.org>
Rendered body type: text/plain

The web page on RM-8737 concerning SS Amateur Rule Changes has been updated.
Additional comments and reply comments will be added as time allows.

It contains the following as of March 13th, 1996:

The Initial Filing, assigned as RM-8737
ARRL Petition for Rulemaking, filed December 12th, 1995.

Comments to RM-8737
San Bernardino Microwave Society 2/20/96
Robert A. Buaas, K6KGS 2/23/96
Southern California Repeater and Remote Base Association
(SCRRBA), 2/23/96
SouthEastern Repeater Association, Inc 2/23/96
TAPR Comments 2/26/96
National Communications System, 2/26/96
George Isely, WD9GIG, President, MACC, 2/26/96
Whit Brown, WB0CJX, Frequency Coordination Chairman, MACC, 2/26/96
The Indiana Repeater Council, 2/28/96
Henry Ruh, KB9FO, Publisher, Amateur Television Quarterly, 2/28/96
Charles M. Albert, Jr. KC6UFM, 3/4/96
Mike Cheponis, K3MC 3/4/96

Reply Comments to RM-8737
Mike Cheponis, K3MC 3/6/96
Bill Tynan, W3XO 3/11/96
AMSAT 3/11/96
TAPR 3/11/96
Phil Karn 3/11/96
Robert A. Buaas, K6KGS 3/11/96
Steven Bible, N7HPR 3/11/96
Naval Postgraduate School 3/11/96
Charles M. (Marty) Albert, Jr. KC6UFM 3/13/96

To review these, you can check http://www.tapr.org/ss

9. Packet Radio: What? Why? How?

From: Greg Jones <wd5ivd@tapr.org>
Date: Mon, 18 Mar 1996 02:13:05 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199603180813.CAA21096@tapr.org>
Rendered body type: text/plain

TAPR is currently working on making a second printing on the publication
"Packet Radio: What? Why? How?"

If you have suggestions regarding the publication before we go to the
printers, please send an e-mail to wd5ivd@tapr.org with your comments.

We can make a few changes and want to get input if you have it.

10. TAPR Virtual Meeting, Workshop, Seminar Page

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 26 Mar 1996 00:24:20 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing), netsig@tapr.org (NETSIG mailing),
bbssig@tapr.org (BBS SIG mailing)
Message-ID: <199603260624.AAA00696@tapr.org>
Rendered body type: text/plain

TAPR has updated its TAPR Virtual Meeting, Workshop, Seminar Page

We have added an interview with Joe Borvitz, WA5VMS, concerning Land Mobile
Radio Modifications.

The interview took place after the Green Country Convention this past week.
The 30 min interview with Joe Borvtiz, WA5VMS, focuses on Land Mobile Radio

Modifications and issues for amateur radio usage. Joe is one of the two
authors of the upcoming TAPR Land Mobile Radio Modifications Book. Joe
covers general information on several radios, minimum test equipment needed,
prices, and some general thoughts on the subject at hand.

The TAPR book should be available later this year.

http://www.tapr.org

11. TAPR GPS Purchase (Announcement)

From: Greg Jones <wd5ivd@tapr.org>
Date: Sun, 31 Mar 1996 21:22:02 +4200 (CST)
To: aprssig@tapr.org (APRS SIG), tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199604010322.VAA14495@tapr.org>
Rendered body type: text/plain

TAPR offers group GPS purchase 4/1/96

TAPR working with Bob Bruninga, WB4APR, will be making a group purchase on
Garmin 20 GPS units.

For full details on the purchase as well as information regarding the unit,
please see the following web page http://www.tapr.org/gps

The price will be:
   $165.00 US for members of TAPR
       or
   $175.00 US for non-members

This kit will include:
     * Garmin GPS-20 (MultiTrac8 sensor) engine (1.83" x 2.74" x .45")
          The Garmin GPS-20 is similar to the Garmin GPS-45

     * RF pig tail with connector for unit
         (one end is the MCX male connector
            and the other end will be non-connected - see below)

     * power/data cable with connector shell and pins
         (The connector is a subminiature PCB edge connector
          and will need to be built - see below)

     * Documentation

TAPR will be taking orders for 50 units, which is the minimum purchase.
Once 50 units have been purchased TAPR will order the Garmin units.
TAPR will deposit money when the units are ordered from Garmin and ship
when the units arrive from Garmin. It is expected that the demand will
be high, thus a short period should be required to receive the 50 orders.

Please note: This is not an enclosed/sealed unit. It is assumed that
the purchasers will be installing the unit in another enclosure for normal
and experimental operations.

No 10% Discount for TAPR Members. Due to the nature of the purchase,
the $165 purchase price for TAPR members represents the membership
discount.

If you would like to order one of these units, you can
      e-mail tapr@tapr.org,
      phone (817) 383-0000, or
      fax (817) 566-2544.

      Office Hours: Tuesday - Friday 9am - 12pm, 3pm - 5pm Central Time

These units will be useful with current APRS software and the upcoming TAC
(Totally Accurate Clock) kit that Tom Clark, W3IWI, has begun discussing
with TAPR to do as a kit in the future. For more on the TAC project
check: ftp://aleph.gsfc.nasa.gov/GPS/totally.accurate.clock/

Questions concerning the unit and details on the buy will be handled on
the TAPR APRS Special Interest Group list. To subscribe,
   send e-mail to:
       listserv@tapr.org.
   In the message type
       subscribe aprssig YourFirstName YourLastName.
The server will then send you a message back. Announcements on the status
of the shipment will be made to the TAPR APRS SIG and TAPR-BB lists.

Shipping and Handling
---
* Shipping and Handling within the US will be $7.00 US
    by UPS Ground unless otherwise requested by purchaser.

* International Shipping will need to contact the TAPR office and get a
  quote on the shipping to your country. TAPR uses International Express
  Mail, unless the purchaser requires something else.

General Information

All Garmin engines come complete with DGPS input capability
(see note below), PPS timing output and lithium 3V battery on board.

MultiTrac8: Tracks and uses up to 8 satellites for accurate, reliable
GPS data at an incredibly low 1 watt power consumption. Unit has and a
real time clock, PPS timing and nonvolatile memory right on the board.

Footprint (1.83" x 2.74" x .45")

Architecture	Patented MultiTrac8
Time to first fix	
reacquisition	< 2 sec
warm	20 sec
cold	2 min
sky search	15 min
update rate	1 sec continuous
Dynamics	
velocity	999 knots
acceleration	3 g
jerk	20 m/s^3
Datums	102 predefined, 1 user defined
Electrical	
input voltage	5.0V DC +- 5% regulated (a suitable regulator should be used)
power consumption	0.8 watts
backup	on board 3V lithium (10 year lifetime)
sensitivity	-166 dBW
Connector	
antenna	50 ohm MCX female connector for active (5V DC @ 15ma) or passive antenna
power/data	single row, right angle 12 pin male
Physical	
configuration	1 integrated board engine
size	1.83"W X 2.75"L X 0.45"H
weight	1.1 oz
op temp	-30 deg C - 80 deg C (remove Li battery for extended usage above 80 deg C)
storage temp	-40 deg C - 85 deg C
Interface	
compatibility	2 RS-232 serial ports
data rate	User selectable baud rate 1200/2400(tx only)/4800/9600
format	NMEA 0183 v.2.0, ASCII
inputs	Initial position, date and time (not required), 2D/3D & earth datum command, RTCM-104 v.2.0 differential
outputs	Position, velocity & time, receiver and satellite stautus, geometry and error estimates
timing output	Timing output with +- 1 microsecond accuracy

Frequently Asked Questions
---

* Any altitude limitations?
  The GPS engines will deactivate themselves above 50,000 feet.

* The Garmins only send out final solutions (NMEA sentences).

There is no other data available from them (including preprocessing data).

* The Multitrak8 has only one channel, but is multiplexed.

* The Multitrak8 can accept DGPS signals (see note below).

* Antenna options (which can be purchased directly from Garmin if required)
  include:
      - mag mount
      - flange mount (bolt to a car)
      - trunk clip
      - suction cup mounted

* The unit has true time clocks, PPS timing, and nonvolatile memory
  on board.

* The interface is NMEA 0183 (TTL levels) and RS232 (+ and - 15 volts)

* The unit can be powered by AA batteries.
  Batteries or external supplies will require a suitable power regulator.

* The unit only gives NMEA sentences as output, no extraction
  of RTCM-104 data.

* There's no problem with the antenna being close to the boards.
  All sensitive components are shielded.

* The unit has a LNAs and you can use passive antennas.
  You need to keep the antenna runs short however.

* The antenna is attached with a MCX connector, which is a friction
  lock connector. A male MCX connector with short RF cable is included
  in the kit purchase.

* There's a header for connecting the data cables.
  A connector and cable will be included in the kit (it will need
  to be soldered). The connector is a subminiature PCB edge connector.
  This is not the same connector as used with many hand-held units.

* You cannot adjust the intervals that the boards outputs data.
  However, you can adjust their baud rate. At 4800 the boards repeat
  data every 2 seconds. At 9600 baud, data is repeated every 1 second.

* The boards do adjust for leap seconds (via the satellites).

* For DGPS, since these are just the boards, you can't use the Garmin DGPS
  receivers. The Garmin units get tuning instructions from the GPS keyboard

  (which are not on the boards). To receive DGPS signals, you'll need a
  tunable beacon receiver. Correction signals are sent in through the
  data in cable (just like the handhelds).

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
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e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: http://www.tapr.org/tapr
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April 1996

Original source file: tapr-bb.9604
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1996-04/TAPR-BB_1996-04.txt

1. Update on Dayton Activities

```
From: Greg Jones <wd5ivd@tapr.org>
Date: Mon, 1 Apr 1996 03:41:57 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199604010941.DAA11644@tapr.org>
Rendered body type: text/plain
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TAPR Dayton Activities '96

TAPR again will be very active at this year's Hamvention.  With the joining
of the TAPR spring meeting with the ARRL Digital Communications Conference,
TAPR Dayton activities now make up TAPR's Spring gathering.  If you are
attending Dayton, please take a look at the following schedule.  We have
tried to improve upon last year and we believe we have.  Come join us at the
Digital Forum on Friday and then come have Dinner and a good time that
evening at the PacketBASH.

Our booth will be in its usual place and activity around the booth is
expected to be high, with the APRS SIG and the Sproul brothers showing the
latest in Windows and MAC APRS at one end of the booth.  It is rumored that
there will be a APRS CD-ROM made available at that time.  So -- if you are
an APRS enthusiast, plan to stop by.

The dates for this year's Dayton Hamvention is May 17-19, 1996.

TAPR Schedule
-------------
Friday
        12noon -- Exhibit Area Opens
        1:00pm -- TAPR Digital Forum Begins
        7:00pm -- PacketBASH
                (Dinner, Prizes, SIG meetings, Banquet Speaker!)

Saturday
        8am -- Exhibit Area Opens
        6pm -- Exhibit Area Closes
        9pm -- Informal SIG Meeting (TBD)

Sunday
        8am -- Exhibit Area Opens
        2pm -- Exhibit Area Closes


1996 TAPR Digital Forum (Friday)
-------------
The TAPR digital forum should be a great forum this year.  If you have time
at Dayton -- be sure to attend the meeting!

1:00 - 1:45pm
   * Introduction to Digital Communications
     Greg Jones, WD5IVD

1:45 - 2:30pm
   * Making 56K Operations a Reality!
     Barry McLarnon, VE3JF

2:30 - 3:15pm
   * Spread Spectrum Technology and current issues in Amateur Radio
     Phil Karn, KA9Q

3:15 - 3:45pm
   * DAS and PCON and their use in Emergency Communications
     Paul Newland, AD7I

3:45 - 4:15pm
   * BBS Issues and Trends
     Barry Buelow, WA0RJT

4:15 - 5:00pm+
   * APRS Update and SIG Meeting
     Bob Bruninga, WB4APR and Keith Sproul, WU2Z
```

1996 Packet Bash!

The 1996 "Packet BASH" co-sponsored by TAPR and the Miami Valley FM
Association, Dayton's packet radio club, will be held on Friday of the
Dayton Hamvention. The BASH will be moved this year to a very much larger
site! So, if you were one of the folks that felt it was just too crowded for
dinner -- you were not alone. The reason for the move was that TJ's
Restaurant was just a little small for 1995. The event will be held at the
NCR "Sugarcamp" Conference Center and will be catered. The dining room
holds about 300 people! So the more the merrier! Dinner space will be
limited, so make your reservation early for dinner, so that the correct
number of dinners can be ordered in advanced. To make the event even better
-- we can stay a lot later (until at least midnight) than at the TJ's site
last year, so we should have time for informal discussions after dinner.

An event for the digitally-inclined ham, featuring:
   * Buffet dinner
   * Nationally-known speaker holding forth on a current topic
   * TAPR special interest group meetings
   * "Birds of a Feather" gatherings

We hope that this will provide an opportunity for packet and digital radio
enthusiasts to have a great night out while at Hamvention.

The schedule of events for the PacketBASH is still tentative, but will look
something like this:
     1900 -- Doors Open (7pm)
     1930 -- Dinner (7:30pm)
          -- Speaker, raffle, and SIG meetings after dinner

Talk-in will be on 146.415 simplex.

Directions:
        Head South on I-75 from Hamvention (North of Dayton)
        Take 35 to the East around the south part of Dayton
        Take SR48 (also know as S. Main) South
        Exit on West Schantz and head West
        Site complex is on the North side of Schantz about 2 blocks from SR48.
        NCR "Sugarcamp" Conference Center, 101 W. Schantz Ave. --

For more information, send email to "packbash@ag9v.ampr.org" or stop by the
TAPR booth at Dayton for schedule and map. The maps are currently available
on http://www.tapr.org

The cost is $20.00 per person, tax and tip included.

Banquet tickets can be ordered from the TAPR office. Reservations made
before May 1st will have their tickets mailed to them. After May 1st,
tickets purchased will be available for pickup at the TAPR booth. Walk-up
to the event will be accommodated as best as possible. There is limited
space (in the way of food ordered) for dinner. Amateurs who wish to hear the
speaker and discussion are asked to arrive around 2030 (8:30pm). All
amateurs are welcome to attend, enjoy the speaker, and participate in the
meetings, although only those purchasing a dinner can eat.

To register, contact:
     PACK*BASH
     c/o TAPR
     8987-309 E. Tanque Verde Road #337
     Tucson, AZ   85749-9399

     Office Hours: Tuesday - Friday 9am-12noon and 3pm - 5pm Central Time
     Phone: (817) 383-0000
     Fax: (817) 566-2544
     Internet: tapr@tapr.org

     Visa/Mastercard Accepted

2. New TAPR/AMSAT DSP-93 Code (4/1/96)

From: Greg Jones <wd5ivd@tapr.org>
Date: Mon, 1 Apr 1996 12:29:20 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing),
        amsat-bb@amsat.org (AMSAT BB Mail Group)
Message-ID: <199604011829.MAA03758@tapr.org>
Rendered body type: text/plain

From: "Mark L. Hammond" <hammond@camel.campbell.edu>
Subject: [DSP-93:2099] SSB93P1.OBJ => new DSP-93 code!

Hi Gang,

Well, Frank has done it again! New DSP-93 code.

The file SSB93P1.OBJ can be found on ftp.tapr.org tapr/dsp93/upload
in the file SSB93P1.txt

Thanks again, Frank!
==========

April 1, 1996

Are you a victim of a restrictive antenna covenant?
Stuck on 2 meter FM? Do you long for the time when
you can have your 4 element 40 meter beam back in
the air, creating its own aurora borealis?

Well, until your team of lawyers make peace with the
neighbors, the DSP-93 development team is pleased to
offer the next best thing, an FM AUDIO TO SSB AUDIO
CONVERTER! With this powerful piece of SW you will
AMAZE your friends, SCARE the cat, and bring a new
AMBIANCE to your dull, tired, 'ol 2-meter repeater!

Operation could not be simpler. Just load SSB93P1.OBJ
the normal way, plug in your headphones to the DSP-93
audio jack, pump that yucky old repeater audio
into radio port 1, and, by simply using the "L" and "H"
keys on your PC through your favorite terminal program,
RESTORE the excitment that only SSB audio can bring
to the reception of ham radio transmissions!

And yes, using the "Z" key, you can go back to dull old
audio instantly, so you know what you are missing!

And when its time to say 73s, the "R" key takes you home.

Special thanks to W5RKN, who conducted the secret testing
of this code so that YOU, once again, can experience
the THRILL that only SSB reception can provide.

73 Frank WB5IPM :-)

 License and Disclaimer

 A no cost, non-exclusive license to use the enclosed software is granted
 to all users of the TAPR/AMSAT DSP-93 DSP computer, with the restriction
 that it be used only for non-commercial amateur radio applications. ALL
 other uses are prohibited under this license. Copyright 1991, 1992, 1993,
 1994, 1995, and 1996, Frank H. Perkins, Jr., WB5IPM. All rights reserved.

 This software is EXPERIMENTAL. It is offered AS IS, without Warranty or
 Guarantee of any kind. NO representation is made that this software is
 suitable for any purpose, or that its operation is reliable. Use this software
 strictly at your own risk. The author, AMSAT and TAPR accept no liability
 for any loss or injury arising directly or indirectly from its use.

 Never use this software under circumstances where its failure to operate
 or its failure to operate as expected, or the failure of the attendant
 hardware could create a dangerous situation, cause loss of data, or could
 cause damage to your amateur radio equipment, computer equipment, or
 any other equipment or property.

 Please contact Greg Jones at TAPR or the author for information on
 commercial licenses of this software.

 Frank H. Perkins, Jr.

3. Additional GPS Questions

From: Greg Jones <wd5ivd@tapr.org>
Date: Mon, 1 Apr 1996 18:28:10 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing), aprssig@tapr.org (BBS SIG mailing)

Message-ID: <199604020028.SAA21714@tapr.org>
Rendered body type: text/plain

We will be adding to the TAPR GPS purchase web page as we answer questions.
Please don't forget to reload the page to see changes. There is a link on
the bottom that gives out the change date of the page.

http://www.tapr.org/gps

Thanks to Bob, WB4APR, for answering the technical issues.

Cheers - Greg

Here are the questions from today.

What is the Warranty.

TAPR will provide replacement units for DOA units that are promptly reported
by the purchaser within 60 days after TAPR ships.

Will the documentation include full description of the proprietary protocol?

Yes, The data on their "proprietary" command protocol is included. Here
"proprietary" means a "non-standard" NMEA command. They start with $PG
instead of $GP...

Will there be a 1 Hz output?

Yes, there is a 1pps signal at no extra charge!

Does Garmin have a web page?

There is no (offical) Garmin web page. There are some unofficial ones. Best
to check Yahoo or other searching services. One you can check for
information on the 45's is: http://www.inmind.com/~thogard/gps/grmnhack.html

----
It appears the GPS-20 does NOT have a built-in display but one has to use an
external computer with unspecified software. Also the external computer is
required to provide tuning instructions. Is this correct?

This is just the GPS engine that produces NMEA outputs. No display, no user
functions...

How does the TAPR pricing compare with single quantity purchases of the
GPS-20 (if available), or that of the GPS-45?

The 5 unit quantity price is $169, but then you pay $3 for the RARE edge
connector and $15 for the RF cable.

Is there a technical advantage of a GPS-20 over the GPS-45?

1) it has the precise time 1 pulse per second output.
2) It does not require a human finger to turn it on and off
   (it is ideal for stand-alone power up applications)

How do these unit compare with the $199 Magellian receivers that do come
with keyboard, display, and antenna?

The GPS-20 has NMEA data output
----

4. PC-DSP Software for Windows (Purchase Plan)

From: Greg Jones <wd5ivd@tapr.org>
Date: Fri, 5 Apr 1996 01:14:26 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199604050714.BAA04752@tapr.org>
Rendered body type: text/plain

Forwarded message:
From: "James R. Kauten, M.D." <kauten@mindspring.com>

For the past several weeks, the subject of digital signal processing has
been discussed on the TAPR DSP list serv. Software designed to facilitate
the further learning and modeling of DSP entities has also been discussed
(PC-DSP). Mention was made of a DSP course utilizing a text and a program
called PC-DSP. Thru discussion with PC Solutions, the developer of the

software, it was discovered that a Windows version is available. There appears to be interest amongst members of the sig to purchase this software.

The web site for DSP Solutions is: http://www.dspsolutions.com. Samples of PC-DSP for Windows and PC-SIM for Windows can be downloaded to sample. Greg Jones, et.al. have made the suggestion that we inquire as to the possibility of a bulk purchase discount.

PC Solutions is willing to give a volume discount, if there is enough interest. The exact discount amount is unknown until the magnitude of the order isdetermined.   It is possible that a group purchase could be made thru TAPR, provided the discount is enough to defray the cost of processing (thru TAPR) and yet provide a reasonable price to the purchasers.

Please send me your name if you are interested in purchasing either or both of these programs. It should also be known that I have no monetary interest in PC Solutions, my only interest is in obtaining the software at a reasonable price for both myself and other hams who are interested.

If enough interest is generated, I will send out a summary as to the discount and ordering details. If little interest is generated, I will let those who responded know so they can place an order on their own.

73, Jim, KO4RQ
==
James R. Kauten, M.D., KO4RQ
==
Phone: (404) 355-9537 (Fax)   (404) 355-9515 (Daytime)
Address: James R. Kauten, M.D., 95 Collier Road, Suite 2055
                                              Atlanta, GA, 30305-1955
==
Atlanta, Home of the 1996 Olympics!!!
==

5. TAPR DSP Web Pages

From: Greg Jones <wd5ivd@tapr.org>
Date: Fri, 5 Apr 1996 12:04:23 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199604051804.MAA00903@tapr.org>
Rendered body type: text/plain

Date: Fri, 5 Apr 1996 11:27:19 -0600 (CST)
From: "Steven R. Bible" <srbible@mindport.net>

I have created what is a beginning of Digital Signal Processing web pages at the TAPR web server. Please point your browsers to:

    http://www.tapr.org/dsp/

THESE ARE YOUR PAGES and they are by no means finished. Presently there is information on the Alef Null DSP CARD 4 and Johan's EVM56K collection of programs. I have a text book bibliography and I've started on an articles bibliography. There are also pointers to other internet sources.

I need your help in making these pages what you want in DSP experimentation web pages. My goal is trying to organize everything there is concerning amateur radio DSP in one location. When I got started in DSP, I was overwelmed at the amount of information there was and how unorganized it is. That is what these pages are for. Remember when you got started in DSP? Remember how frustrating it was? Now is your chance to cahnge all this and organize all the material we can find on amateur DSP experimenting.

So here's what I would like to do.

 - If you know of a DSP project, past, present or future, let's create an individual web page for each. Some projects I am aware of:

    - DSP-93
    - EVM56K (started)
    - TI DSK C5x
    - Alef Null DSP CARD (in progress)
    - any past and future projects

 - Software. Organize software by project and function. Thus if you own a particular platform you can go to that platforms web page and see what's available. On the flip side, software organized by function so that if there is a partcular filter, modem, whatever you are interested in, you can review the source code for that function in attempts to learn or port over to another platform.

- Educational. We all want to learn more about DSP. Perhaps lessons can be posted here.

- any other ideas?

Please make suggestions and comments on the content, format, etc. that would make the pages work for you and others interested in DSP. If you have contributions to add, please send them to me, I'll add them. If you know of information that should be added, let me know, I'll add it. If you feel the pages would read better one way than another, let me know also. THESE ARE YOUR PAGES.

Onward!

- Steve, N7HPR

n7hpr@amsat.org
n7hpr@tapr.org

6. FCC Plan for Reallocated Spectrum - Executive Summary

From: Greg Jones <wd5ivd@tapr.org>
Date: Fri, 5 Apr 1996 21:34:08 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199604060334.VAA28762@tapr.org>
Rendered body type: text/plain

FCC 96-125

Before the
Federal Communications Commission
Washington DC 20554

In the Matter of:)
)
Plan for Reallocated)
Spectrum   )

By the Commission:

Adopted: March 21, 1996 Released: March 22, 1996

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EXECUTIVE SUMMARY (without footnotes)

1. The Omnibus Budget Reconciliation Act Of 1993 (Budget Act) requires the transfer of at least 200 megahertz of spectrum from Government to private sector use. An immediate transfer of 50 megahertz was mandated, with a significant portion of the spectrum to be reserved until after a ten-year period. The remaining spectrum is to be allocated and assigned over a ten-year period. The Budget Act further requires that the Federal Communications Commission prepare, submit to the President and the Congress, and implement a plan for the allocation and assignment under the Communications Act of 1934 of frequencies not immediately transferred.

2. In its Spectrum Reallocation Final Report (Final Report), the National Telecommunications and Information Administration of the U. S. Department of Commerce (NTIA) identified 235 megahertz of spectrum to be transferred, in 12 bands of frequencies with different reallocation status and transfer dates for release from Government to non-Government use. Last year, the FCC acted to allocate the first 50 megahertz made immediately available and to develop rules for the utilization and

assignment of this spectrum. This Spectrum Plan deals with the 185 megahertz of remaining spectrum. While not a proposal for use of these bands, the Spectrum Plan identifies the scope and timing of the future rule making proceedings in fulfillment of the requirements of the Budget Act. Congress anticipated that the FCC would be changing the plan in future proceedings and accordingly enacted appropriate provisions.

3. Aggregating Bands. The first step of this Spectrum Plan is to aggregate into fewer groups the 12 bands of frequencies that comprise the total spectrum to be transferred. This simplification shown below will facilitate the decision process by grouping together several of the bands that are contiguous or sufficiently close in frequency to have similar physical properties.

GROUP (MHZ)	AVAILABILITY/ACCESS
Group 1:	
1390 - 1400	1999
1427 - 1432	1999
1670 - 1675	1999
1710 - 1755	1999

Group 2:	
2300 - 2310	Immediate
2390 - 2400	Reallocated 1995
2400 - 2402	Immediate
2402 - 2417	Reallocated 1995
2417 - 2450	Immediate
Group 3:	
3650 - 3700	1999
Group 4:	
4635 - 4660	1997
4660 - 4685	Reallocated 1995

4. Scheduling. In 1995, the FCC allocated 3 bands that made up the 50 megahertz initially transferred. In view of the fact that all of the remaining bands of Group 2 are immediately available and that the remaining band of Group 4 will become available in less than 10 months, the FCC plans to initiate promptly a rule making to allocate these bands and to develop appropriate service rules, there expeditiously placing these frequencies into private sector use. Similarly, the 1999 date for the availability of Group 3 frequencies, which make up the largest single band to be transferred, points to rule making for this band to be initiated during 1997. The bands of Group I would constitute the reserve frequencies that the Budget Act requires. Thus, in accordance with the timetable for the release of the bands, the following schedule for rule making proceedings is planned:

RULE MAKING PROCEEDINGS	GROUP
Initiate 1996	Groups 2 & 4
Initiate 1997	Group 3
Initiate 2006	Group 1

5. Allocation. The FCC repeatedly has stated that its objective is to

ensure that spectrum is put to its best and most valued use and that the greatest benefit to the public is attained. This goal will be paramount in our proceedings to address the remaining 185 megahertz. In its Report and Order allocating the first 50 megahertz, the FCC further stated that one way to achieve this goal is to adopt an allocation to both fixed and mobile services because permitting this broad use would allow licensees in commercial service to offer a wide

range of services employing varying technologies. The approach was to allocate 25 megahertz for commercial fixed and mobile use without identifying specific services, it was further decided that licenses for the spectrum would be available through competitive bidding to the extent possible and practical. While affirming its belief that a general allocation would yield the most highly valued services for the public, it concluded that the remaining 25 megahertz should be allocated for unlicensed services rather than commercial fixed and mobile terrestrial uses. This also was predicted to yield public benefits in new service capabilities and sharing technologies, and to promote the Commission's goal of ensuring that spectrum is put to its best and most valued use.

6. On March 5, 1996, the Commission held an all-day En Banc hearing that specifically addressed how to formulate spectrum policy for all services, including commercial, private, and unlicensed applications in the United States and submission in international fora. In considering the appropriate use of the remaining 185 megahertz, the Commission intends to consider all options, including but not limited to those addressed in allocating the first 50 megahertz. As required by the Budget Act, this approach will ensure the availability of spectrum for, and the stimulation of the development of a wide array of new technologies and services that will benefit the American public, some of which may not be currently envisioned.

7. Public Safety. Among the wide array of services that we will consider in allocating the remaining 185 megahertz is public safety use. The Omnibus Budget Reconciliation Act of 1993 requires the FCC to study the public safety spectrum needs and to develop a plan that ensures that adequate spectrum is available for public safety uses through the year 2010. At the Commission's En Banc hearing, representatives of public safety agencies outlined their spectrum needs, and in future proceedings the FCC will solicit comment on possible use of some of the transferred bands in support of safety of life and property as part of the national public safety planning activity that was initiated in November 1995. In a separate action the FCC and NTIA have chartered the Public Safety Wireless Advisory Committee to advise on operational, technical and spectrum requirements of Federal, state and local public safety entities through the ycar 2010. The report from the Advisory Committee is due to the FCC and NTIA in the summcr of 1996 and will identify spectrum requirements and possible bands that would fulfill these requirements. The Advisory Committee is considering not only bands transferred in accordance with the Budget Act, but also other bands including frequencies currently used exclusively by the Federal Government and separately by the private sector. The FCC and NTIA will respond to the requirements and recommendations of the Advisorv Commmittee within their respective areas of responsibility. In developing proposals for the remaining transferred frequencies, the FCC may identify possible uses of some parts of this spectrum in support of the Advisory

Committee plan for public safety. A separate proceeding to deal with the public safety issues developed by the Advisory Committee will be initiated in the near future.

--

7. TAPR Server Notice

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 9 Apr 1996 18:05:07 -0500 (CDT)

To: tapr-bb@tapr.org (TAPR-BB mailing), hfsig@tapr.org (HF SIG mailing),
        aprssig@tapr.org (BBS SIG mailing), netsig@tapr.org (NETSIG mailing),
        bbssig@tapr.org (BBS SIG mailing), tapr-tnc@tapr.org (tapr-tnc)
Message-ID: <199604092305.SAA05153@tapr.org>
Rendered body type: text/plain

The TAPR server will be physically relocated during the weekend
of 12 - 15 April. There may be times between now and Monday
night when the system will be unavailable.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
---
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: http://www.tapr.org/tapr
---

8. New Virtual Meeting Entry

From: Greg Jones <wd5ivd@tapr.org>
Date: Wed, 10 Apr 1996 20:19:18 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing), aprssig@tapr.org (BBS SIG mailing)
Message-ID: <199604110119.UAA17319@tapr.org>
Rendered body type: text/plain

A new audio segment has been added to the TAPR Virtual Meeting Page.

Bob Bruninga, WB4APR, has submitted a tape which discusses the new APRS Mic
encoder.

Bob uses the APRS Mic encoder while discussing its usage. The recorded audio
was the results of recording the audio from a scanner listening to Bob talk
on his 2-meter radio with GPS and APRS mic encoder installed. This is an
excellent example of the combination of current narrow-band amateur
technology with newer digital technology to enhance tracking options.

Check www.tapr.org and click on the TAPR Virtual Meeting Page.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
---
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: http://www.tapr.org/tapr
---

9. TAPR Board of Directors Election Completed

From: Greg Jones <wd5ivd@tapr.org>
Date: Thu, 11 Apr 1996 16:41:59 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199604112141.QAA18981@tapr.org>
Rendered body type: text/plain

TAPR Board of Directors Election Completed

The last issue of the PSR had the election ballot for Board of Directions.

The ballots have been received and counted and the following Board members
have been elected:
        Bob Hansen, N2GDE
        Gary Hauge, N4CHV
        Steve Bible, N7HPR

I would like to welcome back to the board Bob Hansen, N2GDE, and Gary Hauge,
N4CHV. Joining the board as a new member is Steve Bible, N7HPR.

Thanks to all the members who voted.

I would like to personally thank Keith Justice, KF7TP, for serving on the TAPR
Board since 1993 and Vice President during 94-95.

Cheers - Greg Jones, WD5IVD
Pres TAPR

10. GPS-20 Purchase STATUS

From: Greg Jones <wd5ivd@tapr.org>
Date: Fri, 12 Apr 1996 03:05:19 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing), aprssig@tapr.org (BBS SIG mailing)

Message-ID: <199604120805.DAA23230@tapr.org>
Rendered body type: text/plain

We are fast approaching the 50+ units that are required for the purchase of the GPS-20 units. Current goal is to place the order the first of next week.

This is to allow any last minute buyers to participate as well as receive one more batch of mail from Tucson. If you plan on getting a GPS-20 in this purchase, please contact the TAPR office ** ASAP **.

*** ALSO *** -- several people have just sent their names to be placed on a list. Dorothy will be attempting to contact all these people, however, TAPR will not be ordering units for folks that have not provided full details on their payment. Please contact Dorothy ASAP if you have not informed her how you will be paying for your unit. If you don't want to send credit information over the Internet you can call (817) 383-0000 or fax (817) 566-2544 the office with the necessary information. If you are sending a check by postal mail -- we need to know that. This might sound brisk, but with an order of over $16,000 -- cash flow for TAPR is an issue.

TAPR will be purchasing a few additional units to allow last minute purchases past the order and with luck we might have a few at Dayton. Bob Bruninga is also purchasing additional units, which I believe he will be making some of these available at Dayton (Bob please comment if I have this wrong).

I'll post another message when we get closer to having the items in and have an approximate ship date. Visa/MCs will be charged when the order is placed with Garmin next week.

People have asked if another purchase will be done in the future. As of right now -- I don't know. We will need to evaluate the outcome of this purchase and see where things are then.

Cheers - Greg, WD5IVD
President TAPR

P.S. Please pass this message along to anyone who you think might not get it from tapr-bb or APRS SIG.

11. TAPR.ORG Status

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 16 Apr 1996 19:38:19 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing), aprssig@tapr.org (BBS SIG mailing),
netsig@tapr.org (NETSIG mailing), bbssig@tapr.org (BBS SIG mailing),
hfsig@tapr.org (HF SIG mailing), dsp-93@tapr.org (DSP-93 Build),
das@tapr.org (das), tapr-tnc@tapr.org (tapr-tnc)
Message-ID: <199604170038.TAA13797@tapr.org>
Rendered body type: text/plain

As your e-mail boxes show, TAPR.ORG is again connected to the net. DataRace, our hosts, relocated their offices this weekend which caused the system outage. While TAPR.ORG was only down for a short time, without the connection to the service provider it was hard to service connections.

If you sent mail during the weekend, there is a good chance that your mail provider held your message and sent it when our connection was reestablished. If you don't see your e-mail then just send it again.

There will be some additional small outages during the week as the MIS folks at DataRace clean up the connection and move wires around.

Thanks for everyone patients during this down time.

Cheers - Greg, WD5IVD

12. Update on Dayton Activities

From: Greg Jones <wd5ivd@tapr.org>
Date: Sat, 20 Apr 1996 01:17:59 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199604200617.BAA02075@tapr.org>
Rendered body type: text/plain

TAPR Dayton Activities '96

TAPR again will be very active at this year's Hamvention. With the joining of the TAPR spring meeting with the ARRL Digital Communications Conference,

TAPR Dayton activities now make up TAPR's Spring gathering. If you are attending Dayton, please take a look at the following schedule. We have tried to improve upon last year and we believe we have. Come join us at the Digital Forum on Friday and then come have Dinner and a good time that evening at the PacketBASH.

Our booth will be in its usual place and activity around the booth is expected to be high, with the APRS SIG and the Sproul brothers showing the latest in Windows and MAC APRS at one end of the booth.

The dates for this year's Dayton Hamvention is May 17-19, 1996.

TAPR Schedule

Friday
        12noon -- Exhibit Area Opens
        1:00pm -- TAPR Digital Forum Begins
        7:00pm -- PacketBASH
                (Dinner, Prizes, SIG meetings, Banquet Speaker!)

Saturday
        8am -- Exhibit Area Opens
        6pm -- Exhibit Area Closes
        9pm -- Informal SIG Meeting (TBD)

Sunday
        8am -- Exhibit Area Opens
        2pm -- Exhibit Area Closes

1996 TAPR Digital Forum (Friday)

The TAPR digital forum should be a great forum this year. If you have time at Dayton -- be sure to attend the meeting!

1:00 - 1:45pm
   * Introduction to Digital Communications
     Greg Jones, WD5IVD

1:45 - 2:30pm
   * Making 56K Operations a Reality!
     Barry McLarnon, VE3JF

2:30 - 3:15pm
   * Spread Spectrum Technology and current issues in Amateur Radio
     Phil Karn, KA9Q

3:15 - 3:45pm
   * DAS and PCON and their use in Emergency Communications
     Paul Newland, AD7I

3:45 - 4:15pm
   * BBS Issues and Trends
     Barry Buelow, WA0RJT

4:15 - 5:00pm+
   * APRS Update and SIG Meeting
     Bob Bruninga, WB4APR and Keith Sproul, WU2Z

1996 Packet Bash!

The 1996 "Packet BASH" co-sponsored by TAPR and the Miami Valley FM Association, Dayton's packet radio club, will be held on Friday of the Dayton Hamvention. The BASH will be moved this year to a very much larger site! So, if you were one of the folks that felt it was just too crowded for dinner -- you were not alone. The reason for the move was that TJ's Restaurant was just a little small for 1995. The event will be held at the NCR "Sugarcamp" Conference Center and will be catered. The dining room holds about 300 people! So the more the merrier! Dinner space will be limited, so make your reservation early for dinner, so that the correct number of dinners can be ordered in advanced. To make the event even better -- we can stay a lot later (until at least midnight) than at the TJ's site last year, so we should have time for informal discussions after dinner.

An event for the digitally-inclined ham, featuring:
   * Buffet dinner
   * Nationally-known speaker holding forth on a current topic
   * TAPR special interest group meetings

```
   *  "Birds of a Feather" gatherings

We hope that this will provide an opportunity for packet and digital radio
enthusiasts to have a great night out while at Hamvention.

The schedule of events for the PacketBASH is still tentative, but will look
something like this:
     1900 -- Doors Open (7pm)
     1930 -- Dinner (7:30pm)
          -- Speaker, raffle, and SIG meetings after dinner
          -- Phil Karn, KA9Q, will be this year's speaker

Talk-in will be on 146.415 simplex.

Directions:
        Head South on I-75 from Hamvention (North of Dayton)
        Take 35 to the East around the south part of Dayton
        Take SR48 (also know as S. Main) South
        Exit on West Schantz and head West
        Site complex is on the North side of Schantz about 2 blocks from SR48.
        NCR "Sugarcamp" Conference Center, 101 W. Schantz Ave. --

For more information, send email to "packbash@ag9v.ampr.org" or stop by the
TAPR booth at Dayton for schedule and map.  The maps are currently available
on http://www.tapr.org

The cost is $20.00 per person, tax and tip included.

Banquet tickets can be ordered from the TAPR office. Reservations made
before May 1st will have their tickets mailed to them.  After May 1st,
tickets purchased will be available for pickup at the TAPR booth.  Walk-up
to the event will be accommodated as best as possible. There is limited
space (in the way of food ordered) for dinner. Amateurs who wish to hear the
speaker and discussion are asked to arrive around 2030 (8:30pm). All
amateurs are welcome to attend, enjoy the speaker, and participate in the
meetings, although only those purchasing a dinner can eat.


To register, contact:
     PACK*BASH
     c/o TAPR
     8987-309 E. Tanque Verde Road #337
     Tucson, AZ   85749-9399

     Office Hours: Tuesday - Friday 9am-12noon and 3pm - 5pm Central Time
     Phone: (817) 383-0000
     Fax: (817) 566-2544
     Internet: tapr@tapr.org

     Visa/Mastercard Accepted
```

13. Update on TAPR group GPS purchase

```
From: Greg Jones <wd5ivd@tapr.org>
Date: Sat, 20 Apr 1996 01:54:32 -0500 (CDT)
To: aprssig@tapr.org (BBS SIG mailing), tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199604200654.BAA03262@tapr.org>
Rendered body type: text/plain
```

```
Update on TAPR group GPS purchase

An order of 130 GPS-20 units was begun on April 20th, 1996 with Garmin.  It
will take a few days to complete the order process with Garmin, since this
is a first time purchase with them and requires a check to be mailed.

90 units were ordered by individuals with TAPR purchasing an additional 40
units for sale from now till Dayton.

The GPS group purchase will be evaluated at Dayton.  We will then decide the
future of other GPS group purchases.

TAPR will continue to take orders for the units until we have sold all the
units we purchased.

Charges have been made on credit cards.  We will post another message when
the units are near shipping.

You can still buy a unit from TAPR as long as units are available.

See you at Dayton!
```

```
-------------------------------------------------------------------------
Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
-------------------------------------------------------------------------
e-mail: TAPR@TAPR.ORG  ftp: ftp.tapr.org   web: http://www.tapr.org/
-------------------------------------------------------------------------
```

June 1996

Original source file: tapr-bb.9606
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1996-06/TAPR-BB_1996-06.txt

1. Letter from FCC regarding LEO issue

```
From: Greg Jones <wd5ivd@tapr.org>
Date: Wed, 5 Jun 1996 23:48:44 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing), tapr-board@tapr.org (TAPR Board),
        pcs@tapr.org (TAPR PCS Project), psr@tapr.org (PSR)
Message-ID: <199606060448.XAA00425@tapr.org>
Rendered body type: text/plain
```

```
Forwarded message:
>From owner-amsat-bb@amsat.org Wed Jun  5 21:14:27 1996
Errors-To: owner-amsat-bb@amsat.org
Sender: owner-amsat-bb@amsat.org
Precedence: List
Date: Wed, 05 Jun 1996 19:23:02 -0400 (EDT)
Date-warning: Date header was inserted by MAIL-CLUSTER.PCY.MCI.NET
From: Fred Maia <fmaia@internetmci.com>
Subject: Letter from FCC
X-Sender: 109IJDQ80KAC@mail36.internetMCI.COM
To: amsat-bb@amsat.org
Message-id: <01I5K76ZWJ3S94HBTY@MAIL-CLUSTER.PCY.MCI.NET>
MIME-version: 1.0
X-Mailer: Windows Eudora Light Version 1.5.2
Content-type: text/plain; charset="us-ascii"
Content-transfer-encoding: 7BIT

The following letter was received from the FCC today.  I am releasing it to
the amateur community since I believe it to be of general interest.  It
concerns the recent publicity about consideration being given by a WRC-97
Industry Advisory Committee to future use of the 144-148 and 420-450 MHz
bands for commercial low-earth orbiting (LEO) satellites.  I feel it would
be advantageous to give this information the widest possible distribution,
therefore you may redistribute it without limitation.
73/Fred/W5YI

------------------------------
Federal Communications Commission
Washington, DC
International Bureau
Satellite and Radiocommunication Division
Room 500, 2000 M Street, N.W.
Washington, DC 20554


June 5, 1996

The W5YI Group, Inc.
Fred Maia, W5YI - Editor
P.O. Box 565101
Dallas, TX 75356

Dear mr. Maia:

        In recent days, over 1,000 members of the Amateur Radio community
have contacted me regarding the upcoming 1997 World Radiocommunication
Conference in Geneva and expressed strong concern that U.S. proposals will
impact adversely on spectrum allocated for Amateur bands.  My purpose in
writing to you is to respond to these concerns and to provide you with
additional information regarding the WRC-97 prepatory process and its
relation to existing services.
        Many of the comments I received have focused on a list of
"candidate" frequency bands discussed at the May 7 meeting of the WRC-97
preparatory Industry Advisory Working Committee Informal Working Group 2A
(IWG-2A).  The comments suggest that the Amateur Radio Service bands,
specifically the 144-148 and 420-450 MHz bands, have been targeted as a
source of spectrum for future Mobile Satellite Service (MSS) operations.
        First, I want to assure the amateur radio community that no amateur
bands have been selected for reallocation.  The list of bands generated on
May 7th represent only the IWG-2A's initial efforts to study spectrum use
below 1 GHz in order to assess the feasibility of proposing world-wide MSS
allocations in that range.  Before recommending preliminary proposals for
consideration by the Commission, IWG-2A participants must first conduct
sharing studies among a range of services using frequencies below 1 GHz.
```

These studies are necessary in order to determine the feasibility of sharing between services, and whether recommending any specific frequency band will be fruitful.

Second, the bands listed reflect only the initial component of a long-term effort to conduct sharing studies before submitting the Committee's proposals to the Commission for review. We intend to conduct sharing studies in bands currently occupied by government and non-government users. In any case, I want to emphasize that the survey on spectrum use is an international matter which involves all frequencies below 1 GHz.

Finally, the current WRC-97 preparatory process, as in years past, operates under a Congressional statute designed to encourage maximum participation by all interested parties. Therefore, all written and electronic comments received at the Commission to date by Amateur Radio operators have been included as part of the public record on WRC-97 proceedings. However, in the interest of efficiency, we have created a designated FCC office and e-mail site to channel future WRC-97 comments directly to the WRC-97 Committee Chairs. I have included our lastest Public Notice outlining these changes and urge you to share it with your members.

I appreciate the many valuable contributions the amateur radio community has made to the progress of radio technology and to ensuring the safety of the American public. I look forward to working with you so that we can continue to advance the use of exciting telecommunications technology both in thge U.S. and abroad.

Sincerely
s/ Cecily C. Holiday
Director, WRC-97 Preparatory Team
Enclosure

Federal Communications Cpommission
Public Notice - June 6, 1996

PROCEDURES FOR SUBMITTING COMMENTS TO THE WRC-97 ADVISORY COMMITTEE

On March 14, 1996, the Committee released Public Notice (No. 61997) (Streamling Notice), that announced its new streamlined World Radiocommunications Conference (WRC) preparatory process. Under this new process, formal Notice of Inquiry (NOI) proceedings are eliminated in favor of developing WRC proposals in the Commission's WRC-97 Advisory Comnmittee. This removes the redundancy that was inherent in our previous "NOI-WRC Advisory Committee" process and enables the United States to respond more effectively to the rapidly evolving international environment and to the ITU's new two-year WRC schedule.

The Streamling Notice included general guidelines for submission of public comments to the Advisory Committee. The Notice states that procedures would be developed to ensure that members of the public continue to have full opportunity to participate in the development of WRC proposals under the new streamlined process, including those parties who do not attend meetings of the Advisory Committee and IWGs.

Since the release of the Streamlining Notice, we have gained experience with our new process. We now provide these procedures for submitting comments to the Advisory Committee.

* Comments on Ongoing Advisory Committee Matters: Parties who wish to comment on the ongoing deliberations of the Advisory Committee and its IWGs may do so at any time.

* Comments on Preliminary Proposals: As announced in the Streamlining Notice, preliminary WRC proposals developed by the Advisory Committee will be released by the Commission in periodic Public Notices. These Public Notices will allow an opportunity for public comment and will provide the appropriate procedures, such as filing deadlines, to be followed.

In either case, parties wishing their comments to be considered directly by the appropriate Advisory Conmmittee group and to become part of the Advisory Committee's public record should submit their comments in writing to Office of the Secretary, Federal Communications Commission, Washington, DC 20554, or by e-mail at "wrc97@fcc.gov." Commenters are requested to file an original plus one copy.

The comment should reference the Advisiory Committee public record file number "Reference No. ISP-96-005" and the appropriate Advisory Committee Informal Working Group, if known, in which their submission should be considered. The FCC staff will ensure that comments filed are considered in the appropriate groups.

For the most expeditious and efficient consideration of their comments,

parties should refrain from filing comments directly with the Chair of the
WRC-97 Advisory committee, with the Chairs and Vice Chairs of the Informal
Worling Groups, with individual FCC staff members or private sector
participants in the Advisory Committee process.

For additional information, contact Cecily C. Holiday, Federal officer of
the WRC-97 Advisory Committee, or Damon C. Ladson, Alternate Federal Officer
at (202) 418-0749, or consult the WRC-97 Homepage on the Inbternet
(http://www.fcc.gov/ib/wrc97/)

--------------------End of Public Notice------------

73/Fred/W5YI


```
 **********************************************************************
 * Fred Maia, W5YI, President                    The W5YI Group, Inc. *
 * W5YI-VEC, Inc. (Amateur)      National Radio Examiners (Commercial) *
 * 2000 E. Randol Mill Rd., Ste #608A    E-mail: fmaia@internetMCI.com *
 * Arlington, TX 76011        Tel: 817/461-6443      FAX: 817/548-9594 *
 * "Your Amateur & Commercial Radio Training and Testing Headquarters" *
 **********************************************************************
```


2. Round 2 - TAPR Garmin GPS-20 Purchase

From: Greg Jones <wd5ivd@tapr.org>
Date: Thu, 6 Jun 1996 14:59:47 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing),
amsat-bb@amsat.org (AMSAT BB Mail Group)
Message-ID: <199606061959.OAA02848@tapr.org>
Rendered body type: text/plain

TAPR offers group GPS purchase (round 2) 6/6/96

The first GPS-20 group purchase was a big success!

TAPR will be making another group purchase on the Garmin 20 GPS units.

For full details on the purchase as well as information regarding the unit,
please see the following web page http://www.tapr.org/gps

The price will be:
$169.00 US for members of TAPR
or
$179.00 US for non-members

This kit will include:
* Garmin GPS-20 (MultiTrac8 sensor) engine (1.83" x 2.74" x .45")
The Garmin GPS-20 is similar to the Garmin GPS-45

* RF pig tail with connector for unit
(one end is the MCX male connector
and the other end will be non-connected - see below)

* power/data cable with connector shell and pins
(The connector is a subminiature PCB edge connector
and will need to be built - see below)

* Documentation

TAPR will be taking orders for 75 units, which is the minimum purchase this
round. Once 75 units have been purchased, TAPR will order the Garmin units.

TAPR will deposit money when the units are ordered from Garmin and ship
when all components have been gathered. Unlike the first order, we do not
know how long it will take to fill the 75 orders, although orders continue
to be made from the last batch.

We had a number of people asking for the altitude option to be set for higher
usage and we will check with Garmin on that on this batch of orders -- but
no promises :-)

Please note: This is not an enclosed/sealed unit. It is assumed that
the purchasers will be installing the unit in another enclosure for normal
and experimental operations.

No 10% Discount for TAPR Members. Due to the nature of the purchase,
the $169 purchase price for TAPR members represents the membership
discount.

If you would like to order one of these units, you can
      e-mail tapr@tapr.org,
      phone (817) 383-0000, or
      fax (817) 566-2544.

      Office Hours: Tuesday - Friday 9am - 12pm, 3pm - 5pm Central Time

Payment method is required upon placement of order (Visa/MC, check, MO,
etc).

These units will be useful with current APRS software and the upcoming TAC
(Totally Accurate Clock) kit that Tom Clark, W3IWI, has begun discussing
with TAPR to do as a kit in the future. For more on the TAC project
check: ftp://aleph.gsfc.nasa.gov/GPS/totally.accurate.clock/

Questions concerning the unit and details on the buy will be handled on
the TAPR APRS Special Interest Group list. To subscribe,
   send e-mail to:
       listserv@tapr.org.
   In the message type
       subscribe aprssig YourFirstName YourLastName.

The server will then send you a message back. Announcements on the status
of the shipment will be made to the TAPR APRS SIG and TAPR-BB lists.

Shipping and Handling
----
* Shipping and Handling within the US will be $7.00 US
    by UPS Ground unless otherwise requested by purchaser.

* International Shipping will need to contact the TAPR office and get a
  quote on the shipping to your country. TAPR uses International Express
  Mail, unless the purchaser requires something else.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
----
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: http://www.tapr.org
----

3. TAPR Internet Move

From: Greg Jones <wd5ivd@tapr.org>
Date: Thu, 6 Jun 1996 15:46:53 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Cc: 0003241437@mcimail.com (Bill Pasternak),
        lenwink@indirect.com (Len Winkler),
        mbohnhof@pop.wwa.com (Mark T. Bohnhoff),
        tapr-board@tapr.org (TAPR Board), wo5h@tapr.org (Dave Wolf TCET),
        hholly@ais.net (Hap Holly)
Message-ID: <199606062046.PAA04673@tapr.org>
Rendered body type: text/plain

The TAPR Internet site will be moving the week of June 10th. During this
week, the TAPR.ORG site will move from our current home at DataRace in San
Antonio, Texas to Fibercom also located in San Antonio. This will be a move
from an ISDN to a T1 located at a site with connections to 3 major
backbones.

This has been in the works for sometime now and we are all very happy to see
the move finalized and happening. This should significantly improve the
speed and reliability of TAPR's network connection.

For most users the move should be transparent, other than a few hours down
time while the system is physically moved. For those few folks still having
trouble with DNS, here are the new IP address:

        tapr.org   204.17.217.20

This address won't be active until the move, so don't change anything yet.

If the dates slips due to some reason, we will let everyone know.

Many thanks to Lee, N5LYT for this great support in the TAPR.ORG system.

Cheers - Greg, WD5IVD

4. Deadline for the next PSR

From: Greg Jones <wd5ivd@tapr.org>
Date: Mon, 10 Jun 1996 23:49:07 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199606110449.XAA07124@tapr.org>
Rendered body type: text/plain

Deadline for the next issue of the PSR is June 15th.

Send articles and information for the issue to Bob Hansen at psr@tapr.org

5. TAPR.ORG New Site

From: Greg Jones <wd5ivd@tapr.org>
Date: Wed, 26 Jun 1996 03:24:57 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Cc: wd5ivd@tapr.org (Greg Jones)
Message-ID: <199606260824.DAA13095@tapr.org>
Rendered body type: text/plain

The TAPR Internet site was moved several miles closer to San Antonio, Texas
-- to its new home at Fibrcom on June 21st, 1996.

Access to TAPR.ORG should be much improved, since we are now connected via
T1s to MCI, Sprint, and CIX backbones.

For most users the move should have be transparent. For those few folks
still having trouble with DNS, here is the new IP address:

        tapr.org   204.17.217.20

This new site will last our needs for sometime to come.

TAPR would like to thank Lee Ziegenhals, N5LYT, and Fibrcom for their
support of our Internet site.

Cheers - Greg, WD5IVD

6. stuff

From: Greg Jones <wd5ivd@tapr.org>
Date: Sat, 29 Jun 1996 05:52:41 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing), tprs-board@tapr.org (TPRS Board),
        tapr-sys@tapr.org (TAPR SYS), aprssig@tapr.org (BBS SIG mailing)
Message-ID: <199606291052.FAA18880@tapr.org>
Rendered body type: text/plain

New addition to the TAPR Virtual Meeting Space!

TPRS (Texas Packet Radio Society) has provided the audio from the day long
digital forum held this past June in conjunction with the DFW HamCom
convention.

Thanks to Dave Wolf, WO5H, President of TPRS and the TPRS group for allowing
TAPR to link to this page and provide additional RealAudio resources.

Check it out!

Talks include:
        DXng by Packet,
                Presley Smith, N5VGC
        Spread Spectrum an Overview,
                Greg Jones, WD5IVD and Tom McDermott, N5EG
        Exploring the Internet,
                Lee Ziegenhals, N5LYT
        Beginning Digital Communications,
                Greg Jones, WD5IVD
        How to use TexNet,
                Jim Neely, WA5LHS
        APRS: Radiolocation by Packet,
                Mike Heskett, WB5QLD
        9600 baud,
                Tom McDermott, N5EG
        Packet and the NWS, and

Bob Morgan, WB5AOH
Accessing the PACSATs.
Robert Diersing, N5AHD

Lots of good pictures as well!

You can get to the page via

http://www.tapr.org under the Virtual Meeting page

or

http://www.tprs.org

July 1996

Original source file: tapr-bb.9607
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1996-07/TAPR-BB_1996-07.txt

1. PC-DSP and PC-SIM for Windows - TAPR Group Purchase

```
From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 2 Jul 1996 00:08:39 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing), hfsig@tapr.org (HF SIG mailing),
        dsp-93@tapr.org (DSP-93 Build)
Cc: psr@tapr.org (PSR)
Message-ID: <199607020508.AAA14429@tapr.org>
Rendered body type: text/plain
```

PC-DSP and PC-SIM for Windows - TAPR Group Purchase

For the past several months, the subject of digital signal processing has been discussed on the TAPR DSP-93 and HFSIG e-mail lists. Software designed to facilitate the further learning and modeling of DSP entities has also been discussed (PC-DSP). Mention was made of a DSP course utilizing a text and a program called PC-DSP. The text is aptly named "Digital Signal Processing-A Laboratory Approach Using PC-DSP" by Oktay Alkin, PhD.

Jim Kauten, KO4RQ, checked with PC Solutions, the developer of the software, and it was discovered that a Windows version is available. There are versions available for Win 3.1x, Win NT, and Win 95.

After discussion with PC Solutions, they are willing to give a volume discount if there is enough interest. Jim announced the offer several weeks ago and approximately 30 people expressed an interest. Based on this interest TAPR will do a group purchase.

The cost per unit for either the PC-SIM or PC-DSP (for Windows) package will be $220.00 US plus $6 shipping/handling (*). The normal price is $256 + s/h from PC Solutions. A savings of $30+ for all those involved in the group purchase.

21 orders must be placed with Dorothy at the TAPR office before the purchase will be made. These are orders (i.e. check, MO, or Visa/MC). This is not a call to generate a list that will be contacted at some future time. As with past group purchases, monies collected for the purchase will not be deposited until the order is placed.

This information is available at:
     http://www.tapr.org/tapr/html/dsp93.html

Overview:

The PC-DSP is an interactive, menu-driven software package used for: waveform synthesis using a variety of methods, basic signal operation, fast Fourier transforms, convolution and correlation, solution of difference equations, analysis and design of IIR and FIR filters, digital filter simulation and code generation, and power spectrum estimation using classical and modern techniques. Some key features of PC-DSP listed include: GNUPLOT support, code generation, macro compiler, dialog compiler, sound file support, data file formats, and compatibility with PC-SIM.

PC-SIM is described as a continuous- and discrete-time simulator that is used for time-domain simulation of systems described by block diagrams. It was designed to be a flexible and open-ended tool to allow simulation of a broad range of systems encountered in communications, signal processing, and control theory. Some of the key features mentioned include: pre-defined components, code generation, sound file support, and compatibility with PC-DSP.

Demo versions of both programs are available from the PC Solutions web site: http://www.dspsolutions.com.

Information regarding the software should be directed to Jim Kauten, MD, KO4RQ (kauten@mindspring.com).

Orders for software should be directed to the TAPR office tapr@tapr.org

TAPR would like to thank Jim, KO4RQ, for his effort in organizing this
purchase.

TAPR
8987-309 E. Tanque Verde Rd., #337
Tucson, AZ 85749-9399

Office: 817-383-0000
Fax: 817-566-2544
E-mail: TAPR@TAPR.ORG

Office Hours: Tue - Fri, 9am - 12noon & 3pm - 5pm Central Time

(*) Note: There will be no 10% membership discount on this purchase.

July 2nd, 1996

2. Update on PC-DSP and PC-SIM Group Purchase

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 2 Jul 1996 23:00:17 -0500 (CDT)
To: dsp-93@tapr.org (DSP-93 Build), hfsig@tapr.org (HF SIG mailing),
tapr-bb@tapr.org (TAPR-BB mailing), psr@tapr.org (PSR)
Message-ID: <199607030400.XAA15843@tapr.org>
Rendered body type: text/plain

Update on TAPR Group Purchase of the PC-DSP and PC-SIM software. It was
unclear in the first posting that this was indeed a software bundle. Sorry
for any problems this might have caused.

We received 5 orders just today at the TAPR office -- so get those orders
rolling!

PC-DSP and PC-SIM for Windows (bundle) - TAPR Group Purchase

For the past several months, the subject of digital signal processing has
been discussed on the TAPR DSP-93 and HFSIG e-mail lists. Software designed
to facilitate the further learning and modeling of DSP entities has also
been discussed (PC-DSP). Mention was made of a DSP course utilizing a text
and a program called PC-DSP. The text is aptly named "Digital Signal
Processing-A Laboratory Approach Using PC-DSP" by Oktay Alkin, PhD.

Jim Kauten, KO4RQ, checked with PC Solutions, the developer of the software,
and it was discovered that a Windows version is available. There are
versions available for Win 3.1x, Win NT, and Win 95.

After discussion with PC Solutions, they are willing to give a volume
discount if there is enough interest. Jim announced the offer several weeks
ago and approximately 30 people expressed an interest. Based on this
interest TAPR will do a group purchase.

The cost for the software bundle (PC-SIM and PC-DSP (for Windows)) will be
$220.00 US plus $6 shipping/handling (*). The normal price is $256 with s/h
from PC Solutions. A savings of $30 for all those involved in the group
purchase.

21 orders must be placed with Dorothy at the TAPR office before the
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is not a call to generate a list that will be contacted at some future time.
As with past group purchases, monies collected for the purchase will not be
deposited until the order is placed.

This information is available at:
http://www.tapr.org/tapr/html/dsp93.html

Overview:

The PC-DSP is an interactive, menu-driven software package used for:

waveform synthesis using a variety of methods, basic signal operation, fast Fourier transforms, convolution and correlation, solution of difference equations, analysis and design of IIR and FIR filters, digital filter simulation and code generation, and power spectrum estimation using classical and modern techniques. Some key features of PC-DSP listed include: GNUPLOT support, code generation, macro compiler, dialog compiler, sound file support, data file formats, and compatibility with PC-SIM.

PC-SIM is described as a continuous- and discrete-time simulator that is used for time-domain simulation of systems described by block diagrams. It was designed to be a flexible and open-ended tool to allow simulation of a broad range of systems encountered in communications, signal processing, and control theory. Some of the key features mentioned include: pre-defined components, code generation, sound file support, and compatibility with PC-DSP.

Demo versions of both programs are available from the PC Solutions web site: http://www.dspsolutions.com.

Information regarding the software should be directed to Jim Kauten, MD, KO4RQ (kauten@mindspring.com).

Orders for software should be directed to the TAPR office tapr@tapr.org

TAPR would like to thank Jim, KO4RQ, for his effort in organizing this purchase.

TAPR
8987-309 E. Tanque Verde Rd., #337
Tucson, AZ 85749-9399

Office: 817-383-0000
Fax: 817-566-2544
E-mail: TAPR@TAPR.ORG

Office Hours: Tue - Fri, 9am - 12noon & 3pm - 5pm Central Time

(*) Note: There will be no 10% membership discount on this purchase.

July 2nd, 1996

3. Garmin GPS-20 UPdate

From: Greg Jones <wd5ivd@tapr.org>
Date: Sun, 7 Jul 1996 14:50:27 -0500 (CDT)
To: aprssig@tapr.org (BBS SIG mailing), tapr-bb@tapr.org (TAPR-BB mailing)
Cc: psr@tapr.org (PSR)
Message-ID: <199607071950.OAA19253@tapr.org>
Rendered body type: text/plain

Greetings.

Here is an update on round two of the TAPR group buy on GPS-20 units.

As of today (7/7/96) the TAPR office has received orders for 40 of the 75 units required.

We need another 35 orders before we can place the group purchase.

Information and pictures on the GPS-20 are available at
http://www.tapr.org/gps

Cheers - Greg, WD5IVD

4. TRAKBOX Kits (Available)

From: Greg Jones <wd5ivd@tapr.org>
Date: Thu, 25 Jul 1996 00:20:42 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing),
        amsat-bb@amsat.org (AMSAT BB Mail Group)

Message-ID: <199607250520.AAA23836@tapr.org>
Rendered body type: text/plain

TAPR to offer a limited production of TrakBox units.

Due to the continued demand for TrakBox kits and with the help of Jack Davis,
TAPR will be able to make a limited set of TrakBox kits available to the
amateur radio community. Kits will be sold on a first come basis.

For details, please check
    http://www.tapr.org/tapr/html/trakbox.html
    or contact the TAPR office.

Internet: tapr@tapr.org,
Web: www.tapr.org
Phone: (817) 383-0000,
Fax: (817) 566-2544.
Office Hours: Tuesday - Friday 9am - 12pm, 3pm - 5pm Central Time

5. GPS_20 TAPR Update

From: Greg Jones <wd5ivd@tapr.org>
Date: Sun, 28 Jul 1996 19:00:50 -0500 (CDT)
To: aprssig@tapr.org (BBS SIG mailing), tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199607290000.TAA23756@tapr.org>
Rendered body type: text/plain

As an update to the current Garmin GPS-20 group purchase,
we are lacking about 20 orders to meet the requirements of the purchase.

Get those friends and family members ordering :-)

Cheers - Greg, WD5IVD
TAPR

August 1996

Original source file: tapr-bb.9608
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1996-08/TAPR-BB_1996-08.txt

1. GPS-20 Purchase

From: Greg Jones <wd5ivd@tapr.org>
Date: Mon, 5 Aug 1996 01:01:45 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199608050601.BAA29699@tapr.org>
Rendered body type: text/plain

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TAPR offers group GPS purchase                        8/5/96
-------------------------------------------------------------

This is the second round on the GPS-20 units.
There are another 30+ units available in the purchase.

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General Information

TAPR working with Bob Bruninga, WB4APR, will be making a group purchase on
Garmin 20 GPS units.

For full details on the purchase as well as information regarding the unit,
please see the following web page

                http://www.tapr.org/gps    --  it contains photos!


The price will be:
   $169.00 US for members of TAPR
       or
   $179.00 US for non-members

This kit will include:
     * Garmin GPS-20 (MultiTrac8 sensor) engine (1.83" x 2.74" x .45")
          The Garmin GPS-20 is similar to the Garmin GPS-45

     * RF pig tail with connector for unit
         (one end is the MCX male connector
            and the other end will be non-connected - see below)

     * power/data cable with connector shell and pins
         (The connector is a subminiature PCB edge connector
          and will need to be built - see below)

     * Documentation


TAPR will be taking orders for 100 units, which is the minimum purchase.
Once 80 units have been purchased TAPR will order the Garmin units.
TAPR will deposit money when the units are ordered from Garmin and ship
when the units arrive from Garmin.

Please note:  This is not an enclosed/sealed unit.  It is assumed that
the purchasers will be installing the unit in another enclosure for normal
and experimental operations.

No 10% Discount for TAPR Members.  Due to the nature of the purchase,
the $165 purchase price for TAPR members represents the membership
discount.

If you would like to order one of these units, you can
      e-mail tapr@tapr.org,
      phone (817) 383-0000, or
      fax (817) 566-2544.

      Office Hours: Tuesday - Friday 9am - 12pm, 3pm - 5pm Central Time

These units will be useful with current APRS software and the upcoming TAC
(Totally Accurate Clock) kit that Tom Clark, W3IWI, has begun discussing
with TAPR to do as a kit in the future.  For more on the TAC project
check: ftp://aleph.gsfc.nasa.gov/GPS/totally.accurate.clock/

Questions concerning the unit and details on the buy will be handled on
```

the TAPR APRS Special Interest Group list. To subscribe,
   send e-mail to:
       listserv@tapr.org.
   In the message type
       subscribe aprssig YourFirstName YourLastName.
The server will then send you a message back. Announcements on the status
of the shipment will be made to the TAPR APRS SIG and TAPR-BB lists.

Shipping and Handling
----
* Shipping and Handling within the US will be $7.00 US
    by UPS Ground unless otherwise requested by purchaser.

* International Shipping will need to contact the TAPR office and get a
  quote on the shipping to your country. TAPR uses International Express
  Mail, unless the purchaser requires something else.

General Information

All Garmin engines come complete with DGPS input capability
(see note below), PPS timing output and lithium 3V battery on board.

MultiTrac8: Tracks and uses up to 8 satellites for accurate, reliable
GPS data at an incredibly low 1 watt power consumption. Unit has and a
real time clock, PPS timing and nonvolatile memory right on the board.

Footprint (1.83" x 2.74" x .45")

Architecture	Patented MultiTrac8
Time to first fix	
reacquisition	< 2 sec
warm	20 sec
cold	2 min
sky search	15 min
update rate	1 sec continuous
Dynamics	
velocity	999 knots
acceleration	3 g
jerk	20 m/s^3
Datums	102 predefined, 1 user defined
Electrical	
input voltage	5.0V DC +- 5% regulated (a suitable regulator should be used)
power consumption	0.8 watts
backup	on board 3V lithium (10 year lifetime)
sensitivity	-166 dBW
Connector	
antenna	50 ohm MCX female connector for active (5V DC @ 15ma) or passive antenna
power/data	single row, right angle 12 pin male
Physical	
configuration	1 integrated board engine
size	1.83"W X 2.75"L X 0.45"H
weight	1.1 oz
op temp	-30 deg C - 80 deg C (remove Li battery for extended usage above 80 deg C)
storage temp	-40 deg C - 85 deg C
Interface	
compatibility	2 RS-232 serial ports
data rate	User selectable baud rate 1200/2400(tx only)/4800/9600
format	NMEA 0183 v.2.0, ASCII
inputs	Initial position, date and time (not required), 2D/3D & earth datum command, RTCM-104 v.2.0 differential
outputs	Position, velocity & time, receiver and satellite stautus, geometry and error estimates
timing output	Timing output with +- 1 microsecond accuracy

```
Frequently Asked Questions
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* Any altitude limitations?
  The GPS engines will deactivate themselves above 50,000 feet.

* The Garmins only send out final solutions (NMEA sentences).
  There is no other data available from them (including preprocessing data).

* The Multitrak8 has only one channel, but is multiplexed.

* The Multitrak8 can accept DGPS signals (see note below).

* Antenna options (which can be purchased directly from Garmin if required)
  include:
       - mag mount
       - flange mount (bolt to a car)
       - trunk clip
       - suction cup mounted

* The unit has true time clocks, PPS timing, and nonvolatile memory
  on board.

* The interface is NMEA 0183 (TTL levels) and RS232 (+ and - 15 volts)

* The unit can be powered by AA batteries.
  Batteries or external supplies will require a suitable power regulator.

* The unit only gives NMEA sentences as output, no extraction
  of RTCM-104 data.

* There's no problem with the antenna being close to the boards.
  All sensitive components are shielded.

* The unit has a LNAs and you can use passive antennas.
  You need to keep the antenna runs short however.

* The antenna is attached with a MCX connector, which is a friction
  lock connector.  A male MCX connector with short RF cable is included
  in the kit purchase.

* There's a header for connecting the data cables.
  A connector and cable will be included in the kit (it will need
  to be soldered).  The connector is a subminiature PCB edge connector.
  This is not the same connector as used with many hand-held units.

* You cannot adjust the intervals that the boards outputs data.
  However, you can adjust their baud rate.  At 4800 the boards repeat
  data every 2 seconds. At 9600 baud, data is repeated every 1 second.

* The boards do adjust for leap seconds (via the satellites).

* For DGPS, since these are just the boards, you can't use the Garmin DGPS
  receivers.  The Garmin units get tuning instructions from the GPS keyboard

  (which are not on the boards).  To receive DGPS signals, you'll need a
  tunable beacon receiver.  Correction signals are sent in through the
  data in cable (just like the handhelds).

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Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
------------------------------------------------------------------------
e-mail: TAPR@TAPR.ORG  ftp: ftp.tapr.org   web: http://www.tapr.org/tapr
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2. ARRL and TAPR DCC Hotel Update

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From: Greg Jones <wd5ivd@tapr.org>
Date: Mon, 5 Aug 1996 17:29:37 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing),
        amsat-bb@amsat.org (AMSAT BB Mail Group), tapr-sys@tapr.org (TAPR SYS)
Message-ID: <199608052229.RAA05511@tapr.org>
Rendered body type: text/plain

ARRL and TAPR Digital Communications Conference, Hotel Update
Seattle, Washington, Sept 20-22, 1996.
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Several people have called the TAPR office informing us that the DCC
Conference Hotel (Quality Inn) had some error in their system over the past
week in regards to the DCC.

The error was that they had canceled our conference :-)

If you called the DCC conference hotel in the last few days and were told
that the conference had been canceled, it was not. This has been corrected
at the hotel. Please call the Quality Inn again and make your reservations.

Be sure to tell them that you are with the 'ARRL and TAPR DCC'.

If you are coming in Sept, be sure to make your room reservations early in
order to get the rooms that are available in the Quality Inn. Rooms in the
Radisson are slightly more expensive in costs. We have a room block until
the first of September, but that block is filling quickly.

For full details on the ARRL and TAPR Digital Communications Conference,
check http://www.tapr.org or call the TAPR office (817) 383-0000.

ARRL and TAPR DCC Hotel Information

Conference presentations, meetings, and workshops will be held at the
Quality Inn Seattle Airport, a complex co-located with the Radisson Hotel
Seattle Airport. Rooms rates are $66/single-double and $76/triple. When
making reservations with the hotel, be sure to indicate you are attending
the ARRL and TAPR DCC conference. It is highly recommended that you book
your room prior to arriving - a block of 75 rooms is reserved until
September 1st, 1996. After the 75 rooms are booked, rooms will only be
available in the Radisson hotel, but will be at a higher price. Be sure to
book your rooms early! The hotel provides transportation to and from SeaTac
Airport. You should contact the hotel to arrange airport transportation.

       Quality Inn Seattle Airport (conference hotel)
       17101 Pacific Highway South, Seattle, WA, 98188
       (206) 246-7000, Fax (206) 246-1715

       Radisson Hotel Seattle Airport (alternate hotel)
       17101 Pacific Highway South, Seattle, WA, 98188
       (206) 244-6000, Fax (206) 246-6835

3. TAPR offers Motorola EVM56002 group purchase

From: Greg Jones <wd5ivd@tapr.org>
Date: Fri, 16 Aug 1996 12:22:26 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing),
amsat-bb@amsat.org (AMSAT BB Mail Group),
hfsig@tapr.org (HF SIG mailing), dsp-93@tapr.org (DSP-93 Build)
Message-ID: <199608161722.MAA09958@tapr.org>
Rendered body type: text/plain

TAPR offers Motorola EVM56002 group purchase 8/15/96

TAPR and Motorola have agreed on a special group purchase of the Motorola
DSP56002 Evaluation Modules (EVM) for a limited time. The DSP56002 EVM is a
general purpose DSP board with on board peripherals and software for
assembling and debugging code. TAPR would like to thank Tim Baggett, AA5DF,
of Motorola for facilitating this purchase.

The price will be:
   $85.00 US (+ s/h) **

         The EVM56002 normally retails through distributors for $150.

         ** No 10% Discount for TAPR Members.
            Due to the nature of the purchase, TAPR cannot offer a
            membership discount.

For more information on the DSP56002EVM purchase, please see the TAPR web
page at http://www.tapr.org

For more information on the DSP56002 EVM and Motorola DSP products visit the
Motorola DSP web page at http://www.motorola-dsp.com.

Please note: This unit provides a minimum interface for radio connections. Additional circuits are required for specific radio interfaces based on the application. See the TAPR HF SIG Upload Area (ftp.tapr.org /tapr/SIG/hfsig/upload) for files on one type of radio interface. There are other units that provide complete radio interfaces and should be considered if you feel that you are not capable of building such items.

This EVM group purchase will include:

* EVM56002 Board
  See below for specs.

* Motorola's DSP56000 cross assembler
* Domain Technologies' debug GUI debug software (DOS, >386 CPU)
  both communicates with the EVM over an RS232 serial port

* Available amateur software developed for the 56002 EVM board

* Documentation
  56000 Family Manual,
  56002 User's Manual,
  56002 Data Sheet,
  Quickstart Guide,
  Debugger manual, and
  Schematics

TAPR will be taking orders for up to 200 units.

Orders will be taken through the ARRL/TAPR Digital Communications Conference in Seattle on September 21-22, 1996.

Shipping will not begin until the units are delivered from Motorola, which will be sometime after September 22nd. Money will be deposited when the order is placed with Motorola.

If you would like to order one of these units, you can
e-mail tapr@tapr.org,
phone (817) 383-0000, or
fax (817) 566-2544.

Office Hours: Tuesday - Friday 9am - 12pm, 3pm - 5pm Central Time

Questions concerning the unit and details on the buy will be handled on the TAPR DSP-93 Special Interest Group list. To subscribe, send e-mail to listserv@tapr.org. In the message type subscribe dsp93 YourFirstName YourLastName. The server will then send you a message back. Announcements on the status of the shipment will be made to the TAPR DSP-93 list and TAPR-BB lists.

Shipping and Handling
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* Shipping and Handling within the US will be $10.00 US
  by UPS Ground unless otherwise requested by purchaser.

* International Shipping will need to contact the TAPR office and get a quote on the shipping to your country. TAPR uses International Express Mail, unless the purchaser requires something else.

General Information

The DSP56002EVM is based on the 56002 general purpose DSP by Motorola. The 56002 is a 24-bit precision, dual memory space harvard architecture digital signal processor. The board contains a stereo CD-quality audio codec, on-board 32k words external SRAM, and an expansion spot for a 32K flash EEPROM. The user only needs to supply the IBM PC compatible computer, a 7-9 volt AC or DC power supply, and an RS232 cable for interfacing to the PC.

The DSP56002 EVM is perfect for the hobbyist and student wishing to learn DSP programming on the Motorola 56002 DSP. Many amateur radio applications have been written and used on the DSP56002 EVM including, 1200 AFSK packet, 9600 FSK packet, RTTY, BPSK, QPSK, and various audio filters for CW, SSB,

and QRM/QRN reduction.

The 24-bit DSP56002 feature:
   40 MHz operation (new EVM's are 6 MHZ, and most have operated at much
      higher clock rates)
   20 MIPS at 40 MHz (50 nS instruction cycle at 40 MHz)
   120 Million Operations per second (MOPS) at 40 MHz
   512x24 bit on-chip program RAM with bootstrap ROM
   two 256x24 bit on-chip data RAMs (X and Y data spaces)
   External memory expansion with 16 bit address and 24 bit data bus
   Byte wide host interface

   Synchronous Serial Interface (SSI)
   Serial Communications Interface (SCI)
   24-bit timer/event counter
   software programmable internal clock PLL

The EVM features:
   32kx24 bit zero wait-state external SRAM
   option for 32Kx8 flash EEPROM for program bootstrapping and
      stand-alone operation
   Crystal Semiconductor's CS4215 stereo CD quality sigma-delta A/D D/A
   on-board voltage regulator
   RS232 interface to the OnCE (tm) controller
   RS232 interface to the DSP SCI port for communication between the
      DSP56002 and a terminal (PC) directly
   connectors for external access to the DSP56002's memory expansion,
      host interface, and serial interfaces (SSI, SCI)
   documentation (56000 Family Manual, 56002 User's Manual, 56002 data
       sheet, quickstart guide, debugger manual, schematics)

The on-board Crystal A/D D/A features:
   24.576 MHz crystal for sampling at 48, 32, 16, 9.6, and 8 Ksps
   16 bit linear, 8-bit mu-law, 8-bit a-law, and 8-bit linear sampling

   the 24.576 MHz crystal can be replaced to provide other sample rates
   Software programmable signal attenuation

P.S. TAPR is also doing a group purchase on PC-DSP and PC-SIM for Windows.
This is an excellent package for learning and developing DSP software.
See: http://www.tapr.org

The PC-DSP is an interactive, menu-driven software package used for:
waveform synthesis using a variety of methods, basic signal operation, fast
Fourier transforms, convolution and correlation, solution of difference
equations, analysis and design of IIR and FIR filters, digital filter
simulation and code generation, and power spectrum estimation using
classical and modern techniques. Some key features of PC-DSP listed
include: GNUPLOT support, code generation, macro compiler, dialog compiler,
sound file support, data file formats, and compatibility with PC-SIM.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
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e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: http://www.tapr.org/tapr
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4. 1996 ARRL/TAPR DCC Proceeding Abstracts

From: Greg Jones <wd5ivd@tapr.org>
Date: Mon, 19 Aug 1996 17:49:33 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing), dcc@tapr.org (Digital Comm Conf),
        tapr-sys@tapr.org
Message-ID: <199608192249.RAA28907@tapr.org>
Rendered body type: text/plain

The following are the abstracts from the upcoming 1996 ARRL and TAPR
15th Digital Communications Conference to be held in Seattle, Washington,
September 20-22nd, 1996. Visit: http://www.tapr.org for more information.

=========

ARRL and TAPR 15th Digital Communications Conference Proceedings 1996

Seattle, Washington

15th Digital Communications Conference
240 pages. Price: TBA

Location:
     Seattle, Washington

Coordinators:
     Steve Stroh, N8GNJ
     Keith Justice, KF7TP
     Steve Ford, WB8IMY
     Greg Jones, WD5IVD

Hosted by:
     Puget Sound Amateur Radio TCP/IP Group
     Boeing Employees Amateur Radio Society (BEARS)

Abstracts:
15th ARRL and TAPR Digital Communications Conference
September 20th, 1996

Learning DSP by Porting Programs to the TAPR/AMSAT DSP-93 Modem
by John Bandy, W0UT
     Introduction: This paper is about porting assembler programs in the
     text authored by Rulph Chassaing and Darrell W. Horning, titled,
     "Digital Signal Processing with the TMS320C25," to the TAPR/AMSAT
     DSP-93. Porting these senior/1st year graduate electrical/computer
     engineering student level programs taught the author many things about
     digital signal processing (DSP) in general and TAPR/AMSAT DSP-93 modem
     in particular.

Linking BPQ Switches via Ethernet
by Bill Barnes, N3JIX
     Abstract: Two or more computers, running G8BPQ node software, can be
     linked using Ethernet with the BPQ driver for ODI. This paper discusses
     the process and outlines the setup files required.

javAPRS: Implementation of the APRS Protocols in Java
by Steve Dimes, KO4HD
     Abstract: This paper describes a implementation of the Automatic
     Position Reporting Systems (APRS) protocols in the computer language
     Java. javAPRS extends the usefulness of APRS to the Internet.

The Radio Amateur Digital System Artificial Intelligence Project
by Garry W. Joerger, N5USG
     Abstract: This paper outlines information on the Radio Amateur Digital
     System Artificial Intelligence Project from it's conception to current
     capabilities and ongoing development. The applications chosen for this
     paper are intended to support amateur radio, weather service, emergency
     management and ultimately the public.

Fast Flow Control in High-Speed Communications Networks
by C.M. Kwan, R. Xu, and L. Haynes
     Abstract: A new approach to flow control in high speed communication
     networks is proposed where the flow control problem is modeled as a
     dynamic system with time delay. The main advantage is that it can
     assure stability of system as well as maintaining certain throughput of
     the communication channel. Inside the controlled, there is a term which
     predicts the future backlogs in the system. The controller is easy to
     implement. Simulation results show that the method offers significant
     less delay than existing methods.

Nonlinear Channel Equalization Using Fuzzy CMAC Neural Network
by C.M. Kwan, R. Xu, L. Haynes, and J.D. Pryor
     Abstract: It is well known that nonlinear distortion over a

communication channel is now a significant factor hindering further increase in the attainable data rates in high-speed data transmission. Since the received signal over a nonlinear channel is a nonlinear function of the past values of the transmitted data pulses, it is not surprising that the linear equalizers do not work efficiently. We propose a new nonlinear equalizer that uses a new type of neural network called a Fuzzy CMAC which combines the advantages of both fuzzy logic and CMAC (Cerebellar Model Arithmetic Computer) networks. The learning speed is an order of magnitude faster than convention neural nets. Moreover, human expert knowledge in the form of linguistic rules can be easily incorporated into the scheme.

Optimization of Phase-Locked Loops with Guaranteed Stability
by C.M. Kwan, H. Xu, C. Lin, and L. Haynes

Abstract: Phase-locked loops (PLL) have found applications in many industrial applications such as communication and control systems. The key requirements are stability and loop performance in terms of signal-to-noise ratio and tracking errors. Here we present a two-step approach to PLL design. First, we present a Lyapunov approach to analyze the loop stability. The parameter range that can guarantee stability can be easily derived in the process. Second, we present a multi-objective optimization method that can search a set of values within the above range of parameters to achieve an optimal trade-off between loop bandwidth, transient and steady-state performance. Simulation results are contained to illustrate the performance of our procedure.

Baseband Group Delay Equalization of IF Filters for Data Communications
by Thomas C. McDermott, N5EG

Abstract: One source of phase (and thus group delay) variation is the IF filter in the receiver. This is either a mechanical filter or more commonly, a crystal filter. These IF filters typically have been optimized for best amplitude rejection of out-of-band signals vs. achievable passband flatness for a given number of filter poles. This typically leads to a Chebychev filter implementation which can have significant group delay variation. If the group delay variation vs. frequency is significant compared to the symbol rate (in baud) then the bit-error-rate of the received signal may be substantially degraded. Techniques to equalize the filer at IF are possible, but may prove difficult to implement and adjust, however they work well independent of the modulation type. On the other hand, equalization of the filer delay at baseband is possible, but is only exact for linear modulation types (PSK, QAM). FSK modulation (which is non-linear) cannot be exactly compensated at baseband, but if the deviationindex is low, then a reasonably good job of delay equalization at baseband can be accomplished. This article examines some amplitude, phase, and delay properties of first-order, second-order, and all-pass filters. In addition, examples of Chebychev and Butterworth IF filers are illustrated. Finally, a graphical representation of delay equalization at baseband is shown.

Easy to Follow Packet
by James Nobis

Abstract: This paper is a general introduction to packet radio. It explains how to setup your packet station and discusses how to use RoseSwitch, TexNet, and TheNet Nodes.

Object-Oriented Modeling of a Satellite Tracking Software
by M. Normandeau and M. Barbeau, VE2BPM

* Winner of Best Technical/theory-oriented Student paper

Abstract: This paper presents a case study of an object-oriented development of a satellite tracking software. It is designed following the Real-Time Object-Oriented Modeling (ROOM) methodology. The design resulting from the application of ROOM is implemented in C++ on the QNX platform. Concurrent actors are naturally mapped to parallel processes. ROOM yields a modular architecture which is clear, reusable, and maintainable. Use of QNX leads to a highly performant and reliable system. This work is important because it shows application of advanced software engineering principles in a field where most of the development is still based on structured (and non-structured) techniques.

XNET: A Graphical Look at Packet Radio Networks
by Richard Parry, W9IF

Abstract: This paper describes AX.25 packet networks from a graphical standpoint using XNET, a software program specifically designed for network analysis. Networks are complex entities most easily explained visually. Through the graphical displays, one can more easily gain an appreciation and understanding of a network. It also allows one to see problems and the general behavior of the network. XNET runs on UNIX/LINUX systems supporting the Tcl/Tk language.

A 9600 Baud modem for the LPT port
by Wolf-Henning Rech, N1EOW, DF9IC@DB0GV.DEU.EU, Don Rotolo, N2IRZ

Abstract: The 9600 Baud FSK modulation according to G3RUH uses our limited bandwidth resources much more efficiently than the popular 1200 Baud AFSK. But one reason for the packet user not to switch to FSK is the higher price of the modem hardware -- usually a TNC2 clone with a large FSK modem board. In contrast, 1200 baud AFSK can be decoded with a very simple and cheap adapter to a PCs COM port containing not much more than a TCM3105, and a BayCom modem originally designed by Johannes DG3RBU. Packet decoding is done by software in the PC, and there is a wide variety of drivers. Even the power supply is derived from the COM port.

We present here a simple modem for 9600 Baud FSK which can be connected to a LPT port (provided its IRQ is installed). It is also powered from the port and does not need any alignment. Several drivers for DOS and Linux are available because of its compatibility to the BayCom PAR96 modem (and its PacComm clones). With DOS and the BayCom program it operates with any computer higher than a 10Mhz 286. It has been originally published in the proceedings of the 12th Internationally Packet Radio Conference Darmstadt, 1996.

Amateur Radio Digital Voice Communications
by Paul Rinaldo, W4RI

Abstract: The telecommunication industry has been busy developing digital voice transmission technologies. While amateurs have made progress in other areas, digital voice has not kept pace. Maybe its because of lack of suitable standards, the unavailability of hardware, satisfaction with existing SSB and FM voice systems or the lack of urgency.

Well, time's up. We need to apply the same energies and talents we did previously in developing single sideband, amateur television, small satellites, and packet radio.

A design engineer once told me, the longer you wait, the easier the job. Obviously, he meant that new devices are constantly becoming available, maybe even the specific application you have in mind. This is true in the case of digital voice coder-encoders (CODECs). Instead of developing coding algorithms and designing application-specific integrated circuits (ASICs), someone else may have handled these chores for you.

Appendix: Spectrum Efficient Digital Land Mobile SYstems for Dispatch Traffic . Working Paty 8A. Draft New Recommendation ITU-R M. [8A/XB]. (47 pages)

WinAPRS: Windows Automatic Position Reporting System. A Windows version of APRS.
by Keith Sproul, WU2Z and Mark Sproul, KB2ICI

Abstract: WinAPRS is a Windows version of the popular APRS, AUtomatic Position Reporting System. WinAPRS is fully compatible with APRS, the DOS version, and the MacAPRS, the Macintosh version. Due to the larger amounts of memory available in the Windows operating system, WinAPRS, just like MacAPRS has mahy additional features not available in the DOS version. This papers describes WinAPRS.

Automatic Radio Direction Finding Using MacAPRS and WinAPRS
by Keith Sproul, WU2Z

Abstract: Radio Direction Finding has been around for almost as long as radio itself. Doppler-based RDF systems have been around for quite awhile too. In the recent past, people have developed computer interfaces to Doppler-based RDF systems. APRS has the ability to display the RDF information on maps, giving the user a graphical way to view the RDF patterns.

Over the last few years, the call sign database available on CD-ROM

from several companies have become more and more sophisticated. There are also databases of commercial frequencies and locations available.

Most of us involved in Amateur Radio have experienced situations where we need to track down the cause of an unwanted radio signal, i.e. stuck microphone, improperly tuned equipment, or even a jammer.

With all of the available technology, we should be able to develop a system that zeros in on a location and automatically shows us the possible transmitters in the area.

Circus of the Stars
by Michelle Toon, KC5CGH
* Winner of Best Educational or Community-Oriented Application Student paper
Abstract: A unique collaboration between diverse groups is proving that, in Waco, Texas, the sky's the limit. This project uses amateur radio to tie sites in the Central Texas area together during a mentoring session based on night-time astronomical observation.

13cm PSK Transceiver for 1.2Mbit/s Packet Radio
by Matjaz Vidmar, S53MV
Abstract: This paper describes the design of a 13cm 1.2Mbit/s PSK transceiver for packet radio by Matjaz Vidmar, S53MV. Includes: schematics, layout, figures, and experimental results.

23cm PSK packet-radio RTX for 1.2Mbit/s user access
by Matjaz Vidmar, S53MV
Abstract: This paper describes the design of a 23cm 1.2Mbit/s user access RTX by Matjaz Vidmar, S53MV. Includes: schematics, layout, figures, and experimental results.

Packet and Internet
by James Wagner, PhD, KA7EHK
Abstract: Debate is one of the interesting aspects of the packet BBS system. One of the recent debate issues is really quite important to all of us. It concerns the question of BBS mail forwarding by methods other than the ham RF network. Whichever side proves to be "right", (and it is possible that both may be right), the answers to this debate will have an impact on all packet users.

Strategies for Improving Wide-Area Networks
by James Wagner, PhD, KA7EHK
Abstract: Wide-area single-frequency networks still cover large areas of this country. A number of strategies have developed for improving such networks, but these strategies are very slow to be adopted. This paper discusses some of the reasons for the continued existence of these networks, some of the strategies and their likelihood of success.

The Word Storage Relay
by Pat West, W7EA
Abstract: This papers discusses the Word Storage Ralay developed for the BOMARC (Boeing and Michigan Aeronautial Research Center) radio control systems.

On-Air Measurements of HF Data Throughput Results and Reflections
by Ken Wickwire, KB1JY
Introduction: For the past year a team of colleagues and I have been collecting and analyzing data on the throughput and other characteristics of various ARQ protocols available to hams and commercial users for HF work. This activity was motivated by discussions (especially among hams) about the relative merits of the new HF digital modes, such as PacTOR, GTOR, CLOVER II, CLOVER-2000, and PacTOR II. Since the discussions often centered on throughput in various conditions, and we were already running several of the protocols, we decided to see for ourselves. This paper describes our assessment approach and measurement campaign, gives summary of our main conclusions, and lists some findings worth noting before protocol choices are made and protocol performance is compared. The paper treats the packet and TOR modes in detail. More extensive reports on CLOVER II, NOS TCP/IP and the ALE orderwire will appear elsewhere.

On-air Measurements of MIL-STD-188-141A ALE Data Text Message Throughput
over Short Links
by Ken Wickwire, KB1JY
     Introduction: For the past six months a colleague W1IMM and I have
     conducted automated measurements of throughput when ASCII text files
     are sent over short or "tactical" HF paths using the ALE Data Text
     Message (DTM) engineering orderwire (EOW). This is a preview of our
     results.

The Technology Grows and Matures
by Bill Henry, K9GWT
     Abstract: Not Available at this time

Constructing a Worldwide HF Data Network
by Craig McCartney, WA8DRZ
     Abstract: Not Available at this time

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
---
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: http://www.tapr.org/tapr
---

5. New Features in RealAudio Player

From: Greg Jones <wd5ivd@tapr.org>
Date: Sun, 25 Aug 1996 11:01:51 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199608251601.LAA04079@tapr.org>
Rendered body type: text/plain

For members using RealAudio to access the TAPR audio features, here is a
note about new software from RealAudio.

The primary improvement of the new software is the ability to save audio to
disk. We are now making audio available to be saved.

Cheers - Greg

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* Progressive Networks Announces New Features in RealAudio Player
  New Version

Progressive Networks introduced RealAudio Player Plus, a new
enhanced version of the RealAudio Player, providing a user
interface with pre-set and scan buttons similar to standard
radio receiver functions. RealAudio Player Plus retails at
$29.95 and operates in the same manner as the free RealAudio
Player, using streaming technology to deliver sound clips as
they are delivered over the Internet rather than downloading a
sound file to the hard disk and then played.

The new functions in the RealAudio Player Plus provide more user
control for listening to RealAudio content on the Web. The
pre-set buttons provide for quickly locating a user's favorite
RealAudio Web sites and scanning allows for finding different
radio stations on the Internet by audio clip. The selective
record function enables off-line listening by saving the
selected audio content to the user's computer and timecast
integration provides for customizing user specific content
delivery. The new version also includes Netscape Navigator 2.0
and Internet Explorer 3.0 with Internet audio essentials and one
month of free unlimited connection time. Player Plus also
integrates improved sound quality for users with 14.4-kbps
modems by downloading more of an audio clip before it plays.

The RealAudio Player Plus works on Windows and Macintosh
platforms. Retail sales will begin sometime in September
however Internet users can order the new version online at the
RealAudio Web site; the RealAudio Player is still available for
free at the site. To use RealAudio a multimedia computer is

required.

http://www.realaudio.com/

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6. DCC Hotel Update

From: Greg Jones <wd5ivd@tapr.org>
Date: Mon, 26 Aug 1996 23:57:19 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199608270457.XAA29483@tapr.org>
Rendered body type: text/plain

Hotel Update!
ARRL/TAPR DCC Conf, Spet 20-22.

Don't forget, if you are planning to attend the DCC in Seattle Wa, the hotel room block expires Sept 6th!

Pre-reg end Sept 1st, so register to get that discount now!

Hotel Information

Conference presentations, meetings, and workshops will be held at the Quality Inn Seattle Airport, a complex co-located with the Radisson Hotel Seattle Airport. Rooms rates are $66/single-double and $76/triple. When making reservations with the hotel, be sure to indicate you are attending the ARRL and TAPR DCC conference. It is highly recommended that you book your room prior to arriving - a block of 75 rooms is reserved until September 6th, 1996. After the 75 rooms are booked, rooms will only be available in the Radisson hotel, but will be at a higher price. Be sure to book your rooms early! The hotel provides transportation to and from SeaTac Airport. You should contact the hotel to arrange airport transportation.

Quality Inn Seattle Airport (conference hotel)
17101 Pacific Highway South, Seattle, WA, 98188
(206) 246-7000, Fax (206) 246-1715

Radisson Hotel Seattle Airport (alternate hotel)
17101 Pacific Highway South, Seattle, WA, 98188
(206) 244-6000, Fax (206) 246-6835

Registration

Contact the TAPR office by Phone, Fax, or e-mail (Internet: tapr@tapr.org) to preregister or for additional meeting information. MasterCard and VISA accepted.

- Preregistration (before Sept 1st) $40.00 *

- Late Registration or at door $45.00 *

* - Conference Registration includes:
    Conference Proceedings, Sessions, Meetings, and Lunch.

- Saturday Evening Dinner (Limited Space) $19.00 **

** - Dinner, Speaker: Lyle Johnson, WA7GXD, Prize Drawing

Workshops

APRS Workshop
Friday, 4pm - 7pm. Conducted by Keith Sproul, WU2Z

- Registration $15.00

How to utilize Part 15 Radios for Ham Applications Workshop, Sunday, 8:00am - 11:00am. Dewayne Hendricks, WA8DZP

- Registration $15.00

Wireless Networking using the WA4DSY 56K RF modem Technology Workshop
Sunday, 12noon - 3pm.

- Registration $15.00

Contact TAPR to register for the DCC.
Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road #337, Tucson, AZ
85749-9399. Phone: (817) 383-0000. Fax: (817) 566-2544.
Internet: tapr@tapr.org   http://www.tapr.org

7. GPS_20 Purchase Update

From: Greg Jones <wd5ivd@tapr.org>
Date: Wed, 28 Aug 1996 23:50:20 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing), aprssig@tapr.org (BBS SIG mailing)
Message-ID: <199608290450.XAA26195@tapr.org>
Rendered body type: text/plain

We need to get another 10 units purchased before the order can be placed.

Get those friends to buy a unit :-)

Cheers - Greg, WD5IVD

8. (no subject)

From: tapr-bb@tapr.org
Date: Wed, 28 Aug 96 22:51:49 -0600
Message-ID: <9608290926.AA07446@combdyn>
Rendered body type: text/plain

***** UNDELIVERABLE MAIL sent to tapr-bb@combdyn.com, being returned by combdyn!uucp *****
rmail: Error # 1 'Unknown system/user' encountered on system combdyn

Received: from nova.unix.portal.com (nova.unix.portal.com [156.151.1.101]) by uucp1.unix.portal.com
(8.6.11/8.6.5) with ESMTP id WAA13225 for <tapr-bb@combdyn.com>; Wed, 28 Aug 1996 22:51:49 -0700
Received: from tapr.org (tapr.org [204.17.217.20]) by nova.unix.portal.com (8.6.11/8.6.5) with ESMTP id
WAA03360 for <tapr-bb@combdyn.com>; Wed, 28 Aug 1996 22:51:03 -0700
Received: from tapr.org (localhost [127.0.0.1]) by tapr.org (8.7.5/8.7.3/1.9) with SMTP id AAA27865;
Thu, 29 Aug 1996 00:02:29 -0500 (CDT)
Date: Thu, 29 Aug 1996 00:02:29 -0500 (CDT)
Message-Id: <199608290450.XAA26195@tapr.org>
Reply-To: tapr-bb@tapr.org
Originator: tapr-bb@tapr.org
Sender: tapr-bb@tapr.org
Precedence: bulk
From: Greg Jones <wd5ivd@tapr.org>
To: tapr-bb@tapr.org
Subject: [TAPR-BB:230] GPS_20 Purchase Update
X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
X-Comment: Tucson Amateur Packet Radio Announcements
Content-Type: text
X-Mailer: ELM [version 2.4 PL25]

We need to get another 10 units purchased before the order can be placed.

Get those friends to buy a unit :-)

Cheers - Greg, WD5IVD

September 1996

Original source file: tapr-bb.9609
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1996-09/TAPR-BB_1996-09.txt

1. 1996 DCC Tentative Schedule

From: Greg Jones <wd5ivd@tapr.org>
Date: Fri, 6 Sep 1996 23:21:04 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing), tapr-sys@tapr.org (TAPR SYS)
Message-ID: <199609070421.XAA15232@tapr.org>
Rendered body type: text/plain

1996 ARRL and TAPR Digital Communications Conference Update

The tentative schedule has been posted on the 1996 DCC Web page
(http://www.tapr.org). It can be viewed via the web page or the pdf file.

See you in less than 15 days!

Cheers - Greg, WD5IVD

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2. (no subject)

From: tapr-bb@tapr.org
Date: Fri, 6 Sep 96 22:29:52 -0600
Message-ID: <9609070924.AA08957@combdyn>
Rendered body type: text/plain

***** UNDELIVERABLE MAIL sent to tapr-bb@combdyn.com, being returned by combdyn!uucp *****
rmail: Error # 1 'Unknown system/user' encountered on system combdyn

Received: from nova.unix.portal.com (nova.unix.portal.com [156.151.1.101]) by uucp1.unix.portal.com
(8.6.11/8.6.5) with ESMTP id WAA09119 for <tapr-bb@combdyn.com>; Fri, 6 Sep 1996 22:29:52 -0700
Received: from tapr.org (tapr.org [204.17.217.20]) by nova.unix.portal.com (8.6.11/8.6.5) with ESMTP id
WAA19275 for <tapr-bb@combdyn.com>; Fri, 6 Sep 1996 22:28:59 -0700
Received: from tapr.org (localhost [127.0.0.1]) by tapr.org (8.7.5/8.7.3/1.9) with SMTP id XAA15546;
Fri, 6 Sep 1996 23:33:04 -0500 (CDT)
Date: Fri, 6 Sep 1996 23:33:04 -0500 (CDT)
Message-Id: <199609070421.XAA15232@tapr.org>
Reply-To: tapr-bb@tapr.org
Originator: tapr-bb@tapr.org
Sender: tapr-bb@tapr.org
Precedence: bulk
From: Greg Jones <wd5ivd@tapr.org>
To: tapr-bb@tapr.org
Subject: [TAPR-BB:234] 1996 DCC Tentative Schedule
X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
X-Comment: Tucson Amateur Packet Radio Announcements
Content-Type: text
X-Mailer: ELM [version 2.4 PL25]

1996 ARRL and TAPR Digital Communications Conference Update

The tentative schedule has been posted on the 1996 DCC Web page
(http://www.tapr.org). It can be viewed via the web page or the pdf file.

See you in less than 15 days!

Cheers - Greg, WD5IVD

---

3. ARLB062 ARRL Petitions FCC To Change Safety Rules (fwd)

From: Greg Jones <wd5ivd@tapr.org>
Date: Mon, 9 Sep 1996 20:25:39 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199609100125.UAA22989@tapr.org>
Rendered body type: text/plain

Forwarded message:
>From w1aw-daemon@arrl.org Mon Sep 9 20:17:49 1996
Subject: ARLB062 ARRL Petitions FCC To Change Safety Rules
X-Mailing-List: w1aw-list
To: QST@tapr.org
From: w1aw@arrl.org

Organization: American Radio Relay League
Date: Mon, 09 Sep 1996 21:14:59 EDT
Message-ID: <$arlb062.1996@arrl.org>

SB QST @ ARL $ARLB062
ARLB062 ARRL Petitions FCC To Change Safety Rules

ZCZC AG42
QST de W1AW
ARRL Bulletin 62 ARLB062
>From ARRL Headquarters
Newington CT September 10, 1996
To all radio amateurs

SB QST ARL ARLB062
ARLB062 ARRL Petitions FCC To Change Safety Rules

The ARRL has petitioned the FCC to reconsider and reverse portions of the Commission's August 1, 1996, Report and Order that imposed RF-emission safety standards on Amateur Radio, including a 50-W threshold to trigger an RF-safety evaluation. In setting the 50-W threshold, the ARRL said, the FCC failed to consider the effect of antenna height, antenna gain, emission mode, duty cycle or operating frequency. The League asked the FCC either to scale the evaluation threshold by frequency to match the maximum permissible exposure (MPE) limits--directly corresponding to the way the regulations scale the exposure levels with frequency--or to set the evaluation threshold for all HF operation at 150 W at a distance of 10 meters from all parts of the antenna.

At or below that power level and at that distance from the radiator, ''you'd be well on the side of safe, even at 100 duty cycle, with any antenna likely to be encountered on HF,'' said ARRL Laboratory Supervisor Ed Hare, KA1CV, our HQ staff liaison to the ARRL RF Safety Committee. ''Some VHF/UHF and microwave station configurations could result in an RF exposure exceeding the requirements of the regulations, so the 50-W limit to trigger an evaluation is more appropriate above 30 MHz,'' said Hare. He emphasized that all stations, regardless of output power or frequency, still must abide by the specified MPE limits for RF.

The new rules, effective January 1, 1997, require licensees of amateur stations running 50 W output or more on any band to conduct a routine RF-safety evaluation to determine if the station could expose people to RF levels that exceed the MPE limits specified in the new rules. (Mobile installations using push-to-talk, regardless of power, are exempt from the environmental evaluation requirement.) In its reconsideration filing, the League called the 50-W threshold ''regulatory overkill'' and ''without scientific basis.'' Among other things, the League said the means to conduct RF radiation evaluations are not yet available, and the ability to reconfigure a station that might exceed the new limits ''is highly problematic.'' Coupled with any state and local land-use and RF-exposure regulations that might exist, application of the new rules ''may constitute a de facto revocation or modification of the station license,'' the League said.

The League also said the FCC adopted the rules ''through flawed procedures'' and without advance notice and opportunity for prior comment.

The ARRL said that the new rules differentiate between ham stations and other Commission licensees ''which are treated far less restrictively.'' While the FCC preempted state and local government regulation of personal wireless service facilities based on environmental effects of RF emissions, it refused to do the same for ham radio ''without any basis for the distinction.''

The ARRL already has asked the FCC to extend the deadline to change amateur examinations and modify question pools, but the Commission has yet to act on the request. The League said that, as it now stands, hams have no way to determine the scope of their obligations under the new rules.

The League suggested the FCC vacate its new RF safety rules governing amateur stations and issue a further notice to permit comment on the proposed rules, and, in particular, the 50-W evaluation threshold.

NNNN
/EX

4. (no subject)

From: tapr-bb@tapr.org
Date: Mon, 9 Sep 96 20:49:18 -0600
Message-ID: <9609100926.AA28378@combdyn>
Rendered body type: text/plain

***** UNDELIVERABLE MAIL sent to tapr-bb@combdyn.com, being returned by combdyn!uucp *****
rmail: Error # 1 'Unknown system/user' encountered on system combdyn

Received: from nova.unix.portal.com (nova.unix.portal.com [156.151.1.101]) by uucp1.unix.portal.com
(8.6.11/8.6.5) with ESMTP id UAA04788 for <tapr-bb@combdyn.com>; Mon, 9 Sep 1996 20:49:18 -0700
Received: from tapr.org (tapr.org [204.17.217.20]) by nova.unix.portal.com (8.6.11/8.6.5) with ESMTP id
UAA03877 for <tapr-bb@combdyn.com>; Mon, 9 Sep 1996 20:48:24 -0700
Received: from tapr.org (localhost [127.0.0.1]) by tapr.org (8.7.5/8.7.3/1.9) with SMTP id UAA23281;
Mon, 9 Sep 1996 20:33:08 -0500 (CDT)
Date: Mon, 9 Sep 1996 20:33:08 -0500 (CDT)
Message-Id: <199609100125.UAA22989@tapr.org>
Reply-To: tapr-bb@tapr.org
Originator: tapr-bb@tapr.org
Sender: tapr-bb@tapr.org
Precedence: bulk
From: Greg Jones <wd5ivd@tapr.org>
To: tapr-bb@tapr.org
Subject: [TAPR-BB:238] ARLB062 ARRL Petitions FCC To Change Safety Rules (fwd)
X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
X-Comment: Tucson Amateur Packet Radio Announcements
Content-Type: text
X-Mailer: ELM [version 2.4 PL25]

Forwarded message:
>From w1aw-daemon@arrl.org Mon Sep 9 20:17:49 1996
Subject: ARLB062 ARRL Petitions FCC To Change Safety Rules
X-Mailing-List: w1aw-list
To: QST@tapr.org
From: w1aw@arrl.org
Organization: American Radio Relay League
Date: Mon, 09 Sep 1996 21:14:59 EDT
Message-ID: <$arlb062.1996@arrl.org>

SB QST @ ARL $ARLB062
ARLB062 ARRL Petitions FCC To Change Safety Rules

ZCZC AG42
QST de W1AW
ARRL Bulletin 62 ARLB062
>From ARRL Headquarters
Newington CT September 10, 1996
To all radio amateurs

SB QST ARL ARLB062
ARLB062 ARRL Petitions FCC To Change Safety Rules

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antenna height, antenna gain, emission mode, duty cycle or operating
frequency. The League asked the FCC either to scale the evaluation
threshold by frequency to match the maximum permissible exposure
(MPE) limits--directly corresponding to the way the regulations
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threshold for all HF operation at 150 W at a distance of 10 meters
from all parts of the antenna.

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''you'd be well on the side of safe, even at 100 duty cycle, with
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Safety Committee. ''Some VHF/UHF and microwave station configurations
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regulations, so the 50-W limit to trigger an evaluation is more
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stations, regardless of output power or frequency, still must abide
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The League also said the FCC adopted the rules ''through flawed procedures'' and without advance notice and opportunity for prior comment.

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The League suggested the FCC vacate its new RF safety rules governing amateur stations and issue a further notice to permit comment on the proposed rules, and, in particular, the 50-W evaluation threshold.
NNNN
/EX

5. GPS_20 Update

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 10 Sep 1996 18:16:12 -0500 (CDT)
To: aprssig@tapr.org (BBS SIG mailing), tapr-bb@tapr.org (TAPR-BB mailing)
Cc: ka5dwr@tapr.org (Dorothy Jones)
Message-ID: <199609102316.SAA18677@tapr.org>
Rendered body type: text/plain

We are beginning to start the process of ordering the GPS-20 from Gramin.

As of today -- we have 75 of the 100 orders required. That leaves TAPR with an additional 25 units to offer.

We plan on shipping shortly after the DCC, since the power connectors and coax are due in the first of October.

If the Garmin units arrive before the DCC, we will plan on bringing a few to the conference to sale and plan on shipping the coax and connectors after the conf. For those that just can;t wait for their unit.

If you want to pickup your unit, minus the coax and power connector, be sure to let Dorothy know before hand so we can plan on having your unit there...this is all based on Garmin getting us the units before we leave for the conference. We will then ship the coax and power connector to you after the conference when they arrive.

Cheers - Greg

6. (no subject)

From: tapr-bb@tapr.org
Date: Tue, 10 Sep 96 17:02:09 -0600
Message-ID: <9609110926.AA18147@combdyn>
Rendered body type: text/plain

***** UNDELIVERABLE MAIL sent to tapr-bb@combdyn.com, being returned by combdyn!uucp *****
rmail: Error # 1 'Unknown system/user' encountered on system combdyn

Received: from nova.unix.portal.com (nova.unix.portal.com [156.151.1.101]) by uucp1.unix.portal.com

(8.6.11/8.6.5) with ESMTP id RAA28064 for <tapr-bb@combdyn.com>; Tue, 10 Sep 1996 17:02:09 -0700
Received: from tapr.org (tapr.org [204.17.217.20]) by nova.unix.portal.com (8.6.11/8.6.5) with ESMTP id RAA25574 for <tapr-bb@combdyn.com>; Tue, 10 Sep 1996 17:01:17 -0700
Received: from tapr.org (localhost [127.0.0.1]) by tapr.org (8.7.5/8.7.3/1.9) with SMTP id SAA19126; Tue, 10 Sep 1996 18:24:58 -0500 (CDT)
Date: Tue, 10 Sep 1996 18:24:58 -0500 (CDT)
Message-Id: <199609102316.SAA18677@tapr.org>
Reply-To: tapr-bb@tapr.org
Originator: tapr-bb@tapr.org
Sender: tapr-bb@tapr.org
Precedence: bulk
From: Greg Jones <wd5ivd@tapr.org>
To: tapr-bb@tapr.org
Subject: [TAPR-BB:243] GPS_20 Update
X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
X-Comment: Tucson Amateur Packet Radio Announcements
Content-Type: text
X-Mailer: ELM [version 2.4 PL25]

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Cheers - Greg

7. LIVE Audio - 1996 ARRL and TAPR DCC

From: Greg Jones <wd5ivd@tapr.org>
Date: Thu, 12 Sep 1996 02:19:44 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199609120719.CAA13128@tapr.org>
Rendered body type: text/plain

1996 ARRL and TAPR Digital Communications Conference
September 20-22, 1996
Seattle, Washington (minutes from SeaTac airport)

Web: http://www.tapr.org

The 1996 ARRL and TAPR Digital Communications Conference will be held on September 20-22, 1996 in Seattle, Washington.

The main paper session on Saturday, September 21st, 1996 will be made available LIVE over the Internet using TAPR's RealAudio Server.

Details and schedule are available on http://www.tapr.org

If you are in the Seattla area, be sure to attend in person!

Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road #337,
Tucson, AZ 85749-9399. Phone: (817) 383-0000. Fax: (817) 566-2544.
Internet: tapr@tapr.org   http://www.tapr.org

8. (no subject)

From: tapr-bb@tapr.org
Date: Thu, 12 Sep 96 01:12:39 -0600
Message-ID: <9609120926.AA22667@combdyn>
Rendered body type: text/plain

***** UNDELIVERABLE MAIL sent to tapr-bb@combdyn.com, being returned by combdyn!uucp *****
rmail: Error # 1 'Unknown system/user' encountered on system combdyn

Received: from nova.unix.portal.com (nova.unix.portal.com [156.151.1.101]) by uucp1.unix.portal.com
(8.6.11/8.6.5) with ESMTP id BAA28132 for <tapr-bb@combdyn.com>; Thu, 12 Sep 1996 01:12:39 -0700
Received: from tapr.org (tapr.org [204.17.217.20]) by nova.unix.portal.com (8.6.11/8.6.5) with ESMTP id
BAA05245 for <tapr-bb@combdyn.com>; Thu, 12 Sep 1996 01:11:47 -0700
Received: from tapr.org (localhost [127.0.0.1]) by tapr.org (8.7.5/8.7.3/1.9) with SMTP id CAA13512;
Thu, 12 Sep 1996 02:37:39 -0500 (CDT)
Date: Thu, 12 Sep 1996 02:37:39 -0500 (CDT)
Message-Id: <199609120719.CAA13128@tapr.org>
Reply-To: tapr-bb@tapr.org
Originator: tapr-bb@tapr.org
Sender: tapr-bb@tapr.org
Precedence: bulk
From: Greg Jones <wd5ivd@tapr.org>
To: tapr-bb@tapr.org
Subject: [TAPR-BB:247] LIVE Audio - 1996 ARRL and TAPR DCC
X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
X-Comment: Tucson Amateur Packet Radio Announcements
Content-Type: text
X-Mailer: ELM [version 2.4 PL25]

1996 ARRL and TAPR Digital Communications Conference
September 20-22, 1996
Seattle, Washington (minutes from SeaTac airport)

Web: http://www.tapr.org

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Internet: tapr@tapr.org   http://www.tapr.org

9. Last call on EVM & ARRL/TAPR DCC Update

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 17 Sep 1996 01:03:10 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing),
amsat-bb@amsat.org (AMSAT BB Mail Group)
Message-ID: <199609170603.BAA09425@tapr.org>
Rendered body type: text/plain

Just a reminder -- the group purchase ends Wed (Sept 25th).
We currently have over 120 units spoken for. This leaves 70+ units
available in the buy.

If you are attending the ARRL/TAPR DCC this next weekend -- see you there!

If you can't make it -- be sure to check the LIVE audio page that
Saturday...we are going to attempt to make the Main Session available over the
Internet. There is a link on the TAPR Home page. http://www.tapr.org

Cheers - Greg, WD5IVD

TAPR offers Motorola EVM56002 group purchase 8/15/96

TAPR and Motorola have agreed on a special group purchase of the Motorola
DSP56002 Evaluation Modules (EVM) for a limited time. The DSP56002 EVM is a
general purpose DSP board with on board peripherals and software for
assembling and debugging code. TAPR would like to thank Tim Baggett, AA5DF,
of Motorola for facilitating this purchase.

The price will be:
   $85.00 US (+ s/h) **

         The EVM56002 normally retails through distributors for $150.

         ** No 10% Discount for TAPR Members.
            Due to the nature of the purchase, TAPR cannot offer a
            membership discount.

For more information on the DSP56002EVM purchase, please see the TAPR web page at http://www.tapr.org

For more information on the DSP56002 EVM and Motorola DSP products visit the Motorola DSP web page at http://www.motorola-dsp.com.

Please note: This unit provides a minimum interface for radio connections. Additional circuits are required for specific radio interfaces based on the application. See the TAPR HF SIG Upload Area (ftp.tapr.org /tapr/SIG/hfsig/upload) for files on one type of radio interface. There are other units that provide complete radio interfaces and should be considered if you feel that you are not capable of building such items.

This EVM group purchase will include:

     * EVM56002 Board
        See below for specs.

     * Motorola's DSP56000 cross assembler
     * Domain Technologies' debug GUI debug software (DOS, >386 CPU)
        both communicates with the EVM over an RS232 serial port

     * Available amateur software developed for the 56002 EVM board

     * Documentation
          56000 Family Manual,
          56002 User's Manual,
          56002 Data Sheet,
          Quickstart Guide,
          Debugger manual, and
          Schematics

TAPR will be taking orders for up to 200 units.

Orders will be taken through the ARRL/TAPR Digital Communications Conference in Seattle on September 21-22, 1996.

Shipping will not begin until the units are delivered from Motorola, which will be sometime after September 22nd. Money will be deposited when the order is placed with Motorola.

If you would like to order one of these units, you can
      e-mail tapr@tapr.org,
      phone (817) 383-0000, or
      fax (817) 566-2544.

      Office Hours: Tuesday - Friday 9am - 12pm, 3pm - 5pm Central Time

Questions concerning the unit and details on the buy will be handled on the TAPR DSP-93 Special Interest Group list. To subscribe, send e-mail to listserv@tapr.org. In the message type subscribe dsp93 YourFirstName YourLastName. The server will then send you a message back. Announcements on the status of the shipment will be made to the TAPR DSP-93 list and TAPR-BB lists.

Shipping and Handling
---
* Shipping and Handling within the US will be $10.00 US
    by UPS Ground unless otherwise requested by purchaser.

* International Shipping will need to contact the TAPR office and get a quote on the shipping to your country. TAPR uses International Express Mail, unless the purchaser requires something else.

General Information

The DSP56002EVM is based on the 56002 general purpose DSP by Motorola. The
56002 is a 24-bit precision, dual memory space harvard architecture digital
signal processor. The board contains a stereo CD-quality audio codec,
on-board 32k words external SRAM, and an expansion spot for a 32K flash
EEPROM. The user only needs to supply the IBM PC compatible computer, a 7-9
volt AC or DC power supply, and an RS232 cable for interfacing to the PC.

The DSP56002 EVM is perfect for the hobbyist and student wishing to learn
DSP programming on the Motorola 56002 DSP. Many amateur radio applications
have been written and used on the DSP56002 EVM including, 1200 AFSK packet,
9600 FSK packet, RTTY, BPSK, QPSK, and various audio filters for CW, SSB,
and QRM/QRN reduction.

The 24-bit DSP56002 feature:
   40 MHz operation (new EVM's are 6 MHZ, and most have operated at much
      higher clock rates)
   20 MIPS at 40 MHz (50 nS instruction cycle at 40 MHz)
   120 Million Operations per second (MOPS) at 40 MHz
   512x24 bit on-chip program RAM with bootstrap ROM
   two 256x24 bit on-chip data RAMs (X and Y data spaces)
   External memory expansion with 16 bit address and 24 bit data bus
   Byte wide host interface

   Synchronous Serial Interface (SSI)
   Serial Communications Interface (SCI)
   24-bit timer/event counter
   software programmable internal clock PLL

The EVM features:
   32kx24 bit zero wait-state external SRAM
   option for 32Kx8 flash EEPROM for program bootstrapping and
      stand-alone operation
   Crystal Semiconductor's CS4215 stereo CD quality sigma-delta A/D D/A
   on-board voltage regulator
   RS232 interface to the OnCE (tm) controller
   RS232 interface to the DSP SCI port for communication between the
      DSP56002 and a terminal (PC) directly
   connectors for external access to the DSP56002's memory expansion,
      host interface, and serial interfaces (SSI, SCI)
   documentation (56000 Family Manual, 56002 User's Manual, 56002 data
       sheet, quickstart guide, debugger manual, schematics)

The on-board Crystal A/D D/A features:
   24.576 MHz crystal for sampling at 48, 32, 16, 9.6, and 8 Ksps
   16 bit linear, 8-bit mu-law, 8-bit a-law, and 8-bit linear sampling

   the 24.576 MHz crystal can be replaced to provide other sample rates
   Software programmable signal attenuation

P.S. TAPR is also doing a group purchase on PC-DSP and PC-SIM for Windows.
This is an excellent package for learning and developing DSP software.
See: http://www.tapr.org

The PC-DSP is an interactive, menu-driven software package used for:
waveform synthesis using a variety of methods, basic signal operation, fast
Fourier transforms, convolution and correlation, solution of difference
equations, analysis and design of IIR and FIR filters, digital filter
simulation and code generation, and power spectrum estimation using
classical and modern techniques. Some key features of PC-DSP listed
include: GNUPLOT support, code generation, macro compiler, dialog compiler,
sound file support, data file formats, and compatibility with PC-SIM.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
----
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: http://www.tapr.org/tapr
----

10. Office Closed during DCC

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 17 Sep 1996 01:04:05 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199609170604.BAA09468@tapr.org>
Rendered body type: text/plain

```
The TAPR office will be closed starting Sept 18th.  The office will be open
again on Sept 24th.

Cheers - Greg
```

11. (no subject)

From: tapr-bb@tapr.org
Date: Mon, 16 Sep 96 23:56:09 -0600
Message-ID: <9609170926.AA06599@combdyn>
Rendered body type: text/plain

```
***** UNDELIVERABLE MAIL sent to tapr-bb@combdyn.com, being returned by combdyn!uucp *****
rmail: Error # 1 'Unknown system/user' encountered on system combdyn

Received: from nova.unix.portal.com (nova.unix.portal.com [156.151.1.101]) by uucp1.unix.portal.com
(8.6.11/8.6.5) with ESMTP id XAA01311 for <tapr-bb@combdyn.com>; Mon, 16 Sep 1996 23:56:09 -0700
Received: from tapr.org (tapr.org [204.17.217.20]) by nova.unix.portal.com (8.6.11/8.6.5) with ESMTP id
XAA29695 for <tapr-bb@combdyn.com>; Mon, 16 Sep 1996 23:55:15 -0700
Received: from tapr.org (localhost [127.0.0.1]) by tapr.org (8.7.5/8.7.3/1.9) with SMTP id BAA09866;
Tue, 17 Sep 1996 01:25:35 -0500 (CDT)
Date: Tue, 17 Sep 1996 01:25:35 -0500 (CDT)
Message-Id: <199609170604.BAA09468@tapr.org>
Reply-To: tapr-bb@tapr.org
Originator: tapr-bb@tapr.org
Sender: tapr-bb@tapr.org
Precedence: bulk
From: Greg Jones <wd5ivd@tapr.org>
To: tapr-bb@tapr.org
Subject: [TAPR-BB:254] Office Closed during DCC
X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
X-Comment: Tucson Amateur Packet Radio  Announcements
Content-Type: text
X-Mailer: ELM [version 2.4 PL25]

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```

12. (no subject)

From: tapr-bb@tapr.org
Date: Tue, 17 Sep 96 00:05:59 -0600
Message-ID: <9609170926.AA06619@combdyn>
Rendered body type: text/plain

```
***** UNDELIVERABLE MAIL sent to tapr-bb@combdyn.com, being returned by combdyn!uucp *****
rmail: Error # 1 'Unknown system/user' encountered on system combdyn

Received: from nova.unix.portal.com (nova.unix.portal.com [156.151.1.101]) by uucp1.unix.portal.com
(8.6.11/8.6.5) with ESMTP id AAA01582 for <tapr-bb@combdyn.com>; Tue, 17 Sep 1996 00:05:59 -0700
Received: from tapr.org (tapr.org [204.17.217.20]) by nova.unix.portal.com (8.6.11/8.6.5) with ESMTP id
AAA00167 for <tapr-bb@combdyn.com>; Tue, 17 Sep 1996 00:05:06 -0700
Received: from tapr.org (localhost [127.0.0.1]) by tapr.org (8.7.5/8.7.3/1.9) with SMTP id BAA09765;
Tue, 17 Sep 1996 01:19:42 -0500 (CDT)
Date: Tue, 17 Sep 1996 01:19:42 -0500 (CDT)
Message-Id: <199609170603.BAA09425@tapr.org>
Reply-To: tapr-bb@tapr.org
Originator: tapr-bb@tapr.org
Sender: tapr-bb@tapr.org
Precedence: bulk
From: Greg Jones <wd5ivd@tapr.org>
To: tapr-bb@tapr.org
Subject: [TAPR-BB:253] Last call on EVM & ARRL/TAPR DCC Update
X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
X-Comment: Tucson Amateur Packet Radio  Announcements
Content-Type: text
X-Mailer: ELM [version 2.4 PL25]

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            Due to the nature of the purchase, TAPR cannot offer a
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      e-mail tapr@tapr.org,

phone (817) 383-0000, or
fax (817) 566-2544.

Office Hours: Tuesday - Friday 9am - 12pm, 3pm - 5pm Central Time

Questions concerning the unit and details on the buy will be handled on the TAPR DSP-93 Special Interest Group list. To subscribe, send e-mail to listserv@tapr.org. In the message type subscribe dsp93 YourFirstName YourLastName. The server will then send you a message back. Announcements on the status of the shipment will be made to the TAPR DSP-93 list and TAPR-BB lists.

Shipping and Handling

* Shipping and Handling within the US will be $10.00 US by UPS Ground unless otherwise requested by purchaser.

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- 20 MIPS at 40 MHz (50 nS instruction cycle at 40 MHz)
- 120 Million Operations per second (MOPS) at 40 MHz
- 512x24 bit on-chip program RAM with bootstrap ROM
- two 256x24 bit on-chip data RAMs (X and Y data spaces)
- External memory expansion with 16 bit address and 24 bit data bus
- Byte wide host interface

- Synchronous Serial Interface (SSI)
- Serial Communications Interface (SCI)
- 24-bit timer/event counter
- software programmable internal clock PLL

The EVM features:

- 32kx24 bit zero wait-state external SRAM
- option for 32Kx8 flash EEPROM for program bootstrapping and stand-alone operation
- Crystal Semiconductor's CS4215 stereo CD quality sigma-delta A/D D/A
- on-board voltage regulator
- RS232 interface to the OnCE (tm) controller
- RS232 interface to the DSP SCI port for communication between the DSP56002 and a terminal (PC) directly
- connectors for external access to the DSP56002's memory expansion, host interface, and serial interfaces (SSI, SCI)
- documentation (56000 Family Manual, 56002 User's Manual, 56002 data sheet, quickstart guide, debugger manual, schematics)

The on-board Crystal A/D D/A features:

- 24.576 MHz crystal for sampling at 48, 32, 16, 9.6, and 8 Ksps
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The PC-DSP is an interactive, menu-driven software package used for:
waveform synthesis using a variety of methods, basic signal operation, fast
Fourier transforms, convolution and correlation, solution of difference
equations, analysis and design of IIR and FIR filters, digital filter
simulation and code generation, and power spectrum estimation using
classical and modern techniques. Some key features of PC-DSP listed
include: GNUPLOT support, code generation, macro compiler, dialog compiler,
sound file support, data file formats, and compatibility with PC-SIM.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
---
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: http://www.tapr.org/tapr
---

13. TAPR SS Position Statement

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 24 Sep 1996 02:13:44 -0500 (CDT)
To: ss@tapr.org (Spread Spectrum), tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199609240713.CAA24566@tapr.org>
Rendered body type: text/plain

This will be published in the upcoming PSR. It was passed at the Board
meeting held last Friday.

Cheers - Greg

TAPR's Statement on Spread Spectrum Technology Development

TAPR was founded in 1982 as a membership supported non-profit amateur radio
research and development organization with specific interests in the areas
of packet and digital communications. In the tradition of TAPR, the Board
of Directors at their Fall 1995 meeting voted that the organization would
begin to actively pursue the research and development of amateur radio
spread spectrum digital communications. At the Spring 1996 board of
directors meeting, the following statement of purpose was passed:

        "TAPR believes that the technical facts support our conviction that
conventional and spread spectrum systems can coexist without detriment to
conventional systems on all frequencies from MF to EHF. To this end, TAPR
will begin to research spread spectrum systems that will develop technology
for future deployment."

As stated above, the TAPR board feels strongly about TAPR's focus on spread
spectrum technology and especially how it relates to the potential
coexistence on frequencies that will have increased number of users
occupying them. The amateur radio bands, like other spectrum will become
more heavily utilized in the future. It is in the interest of amateur radio
to develop systems that are interference-resistant while not interfering
with other primary or secondary users on those frequencies.

TAPR understands the concerns many have with the new technology, and
believes that efforts in both education and research is necessary in order
to allay the fears about interference and to demonstrate the benefits of the
technology.

TAPR believes that todays' communications technology is moving toward all
digital transmitters and receivers. These advances in technology, combined
with the swift evolution of cell based transmission and switching protocols,
are opening up a new set of possibilities for unique new services utilizing
intelligent networks. These will contain smart transmitters, receivers, and
switches. Today's Internet is perhaps the best example of a self-regulating
structure that embodies these new technological approaches to communications
in the networking domain. However, to date, many of these innovations have
not moved into the wireless networking arena. TAPR will work on moving
these innovations into the amateur radio community.

TAPR feels that the VHF/UHF/SHF radio networks of the future will involve a
mixture of links and switches of different ownership, which terminate at the

end-user via relatively short-distance links. What will then be required is a built-in, distributed, self-governing set of protocols to cause the network's behavior to make more efficient use of a limited, common shared resource, the radio spectrum. Creating such a self-regulating structure for the optimal sharing of spectrum will require much effort.

One of the major problems which stands in the way of these new approaches today is the current FCC regulatory environment and the manner in which spectrum is managed and allocated under its rules.

Historically, the current regulatory approach to radio has been based upon the technology that was in use at the time that the Communications Act of 1934 was framed, basically what we would call today, 'dumb' transmitters speaking to 'dumb' receivers. The technology of that time required reserved bandwidths to be set aside for each licensed service so that spectrum would be available when needed. Given this regulatory approach, many new applications cannot be accommodated since there is no available unallocated spectrum to 'park' new services. However, given the new set of tools available to the entrepreneur with the advent of digital technology, what once were 'dumb' transmitters and receivers can now be smart devices which are capable of exercising greater judgment in the effective use and sharing of spectrum. The more flexible the tools that we incorporate in these devices, the greater the number of uses that can be accommodated in a fixed, shared spectrum.

Therefore, TAPR will focus its spread spectrum effort in the following areas:

TAPR will work to promote rules and technologies to make the most efficent use of the spectrum through power control, forward error correction, and other means to minimize interference among spread spectrum users and existing communications systems.

TAPR will work on issues and efforts with other national organizations to change the regulatory environment and rules in order to promote the experimentation, development, and later deployment of spread spectrum technology.

TAPR will work to develop information on the topic to help educate members and the amateur community as a whole about spread spectrum technology, and to disseminate this information via printed publications, the World Wide Web, presentations at conferences and meetings, and other means.

TAPR will work to foster experimentation, development, and design of spread spectrum systems, and to facilitate the exchange of information between the researchers and other interested parties.

TAPR will work to develop a national intra-network to foster the deployment of future high-speed spread spectrum systems into regional and local communities, including the development of suitable protocols and guidelines for deployment of these systems.

TAPR will work with commercial companies who manufacture spread spectrum devices which operate in spectrum shared by the amateur radio service (ARS), in order to make them more aware of the nature of ARS operations on those bands with the goal to work towards the deployment of devices which will minimize interference between all spectrum sharing partners.

TAPR will work with commercial companies who manufacture spread spectrum devices in order to identify equipments that can be either used or modified for use for Part 97 operation.

Adopted by the TAPR Board on September 20th, 1996
at Seatac, Washington Board Meeting.

Spread Spectrum Statement Committee:
Greg Jones, WD5IVD
Dewayne Hendricks, WA8DZP
Barry McLarnon, VE3JF
Steve Bible, N7HPR

October 1996

Original source file: tapr-bb.9610
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1996-10/TAPR-BB_1996-10.txt

1. TAPR Office to reduce to minimum operations

```
From: Greg Jones <wd5ivd@tapr.org>
Date: Thu, 3 Oct 1996 10:01:18 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing), tapr-board@tapr.org (TAPR Board),
        netsig@tapr.org (NETSIG mailing), bbssig@tapr.org (BBS SIG mailing),
        hfsig@tapr.org (HF SIG mailing), dsp-93@tapr.org (DSP-93 Build),
        aprssig@tapr.org (BBS SIG mailing), tapr-sys@tapr.org,
        amsat-bb@amsat.org (AMSAT BB Mail Group)
Message-ID: <199610031501.KAA15057@tapr.org>
Rendered body type: text/plain
```

TAPR Office to reduce to minimum operations Oct 3, 1996

The TAPR Office will shutdown to minimum operations starting October 8th and running at least until October 28th.

This means that Dorothy will not be working the office phones during this period. The office will continue to operate, but at a much reduced level. E-mail, US mail, Voice Mail, etc will still be received and recorded, but everything will be processed at a very much slower rate during this period.

GPS-20 units have begun to ship. As of this e-mail, approximately 40 units have shipped. We are awaiting additional pins for the connector (suppose to arrive Oct 11th) in order to complete the remainder of the units. These pins replace the ones that were incorrect in the shipment we received. Once the pins arrive, we will get the other units out as soon as possible.

The Motorola EVM56002 have been placed on order and are expected to arrive sometime after Oct 21st. They will then be shipped out as time permits under the operational schedule at the office. There are something like 60 of the 200 units still available in this purchase at the $85 + $10 s/h price. Check the TAPR Web page for full details www.tapr.org. First come basis on these units.

TAPR is sorry for any delays that the reduced operations schedule at the office might cause. If everything turns out positive, the office should be back operational towards the end of October.

Cheers - Greg Jones, WD5IVD
President, TAPR

(wd5ivd@tapr.org)

---

2. [TAPR-BB:262] ARRL & TAPR DCC in the Linux Gazette (fwd)

```
From: Greg Jones <wd5ivd@tapr.org>
Date: Sat, 5 Oct 1996 00:09:51 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199610050509.AAA08456@tapr.org>
Rendered body type: text/plain
```

Sender: "Steven R. Bible" <srbible@gnatnet.net>
Subject: ARRL & TAPR DCC in the Linux Gazette

Phil Hughes, WA6SWR, publisher of the Linux Journal visited the ARRL & TAPR DCC conference in Seattle on September 20-22. I think Phil was pleasently surprised to find that Linux was being used by hams. He's written a short piece in the Linux Gazette, an online magazine about Linux, about the DCC. The article is titled:

    Hams, Packet Radio and Linux

and it's located at:

    http://www.ssc.com/lg/issue10/radio.html

I also have noted that a future issue of the Linux Journal is going to have a piece about satellite tracking. For more info see:

    http://www.ssc.com/

Disclaimer: No I have NOTHING to do with SCC. I'm just a fanatical user of
Linux since version 0.96!

73,

 - Steve, N7HPR
 (n7hpr@tapr.org)

3. EVM56002 Group Purchase Update

From: Greg Jones <wd5ivd@tapr.org>
Date: Sat, 5 Oct 1996 02:53:54 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing),
        amsat-bb@amsat.org (AMSAT BB Mail Group), dsp-93@tapr.org,
        hfsig@tapr.org (HF SIG mailing)
Message-ID: <199610050753.CAA14873@tapr.org>
Rendered body type: text/plain

TAPR EVM56002 Group Purchase Update

The last sixty TAPR EVM56002 group purchase units have been spoken for.
Purchase is closed.

Cheers - Greg, WD5IVD

4. TAPR Beta-Test of MIC-E APRS Units

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 15 Oct 1996 20:15:32 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing), aprssig@tapr.org (APRS SIG)
Cc: aprs-fl@tapr.org
Message-ID: <199610160115.UAA22333@tapr.org>
Rendered body type: text/plain

TAPR to begin Beta-test of APRS MIC-E (Mic encoder) units

TAPR is selecting a small group of people to beta-test (or beta-use) the
upcoming MIC-E APRS adapter. The MIC-E (Mic Encoder) installs between your
radio mic and radio and allows your GPS unit to transmit APRS AX.25 frames
at designated intervals without needing a TNC! Very useful in many
settings. You can listen to a discussion of the MIC-E by Bob Bruninga,
WB4APR on http://www.tapr.org/tapr/html/virtual.html

The units are a semi-kit. This means that the board has already been
assembled, but interface wires, box, and other items will still need to be
configured and assembled for proper use. A Garmin GPS-20 can be installed
installed directly on top of the board, inside the enclosure.

The purpose of beta-testing is to help generate and correct the kit
documentation, ensure hardware problems are nonexistent in more variations
not possible during the alpha-test, and that the software is functioning
adequately in a wider range of applications. In addition, these
beta-testers will become the core expert group to help others when the units
are made available to everyone. Beta-testers will be responsible for
communicating during the beta-testing using an Internet e-mail list. Regular
access to Internet e-mail is required.

Beta-test units will be made available to those selected at break-even cost.

If you would like to participate in the APRS MIC-E Beta-Test, you will need
to check

        http://www.tapr.org/tapr/html/mic-e.question.html

and fill out the questions in as much depth as possible. Since there will be
a limited number of Beta units available, this information will be used to
select the best possible group for testing the units.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
---
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: http://www.tapr.org/tapr
---

5. TAPR GPS-20 Group Purchase Update

From: Greg Jones <wd5ivd@tapr.org>
Date: Wed, 16 Oct 1996 13:15:17 -0500 (CDT)
To: aprssig@tapr.org (BBS SIG mailing), aprs-fl@tapr.org,
tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199610161815.NAA00300@tapr.org>
Rendered body type: text/plain

TAPR GPS-20 Group Purchase Information

Due to the popularity of the GPS-20 group buys, TAPR plans on just taking
continuous orders. Thus, TAPR will take orders for around 100 units and
then do a purchase and then start another buy right away. Please remember
that an order with payment must be received to get a unit -- this is NOT a
collection list for purchase.

The current GPS-20 orders are being shipped this week and next. TAPR is now
taking orders for another batch of 100 units.

Full details can be found on: www.tapr.org

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
---
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org web: http://www.tapr.org/tapr
---

6. 1996 ARRL and TAPR DCC Audio and more!

From: Greg Jones <wd5ivd@tapr.org>
Date: Thu, 24 Oct 1996 14:12:35 -0500 (CDT)
To: tapr-bb@tapr.org (TAPR-BB mailing), billwa6itf@aol.com (Bill Pasternak),
lenwink@indirect.com (Len Winkler),
mbohnhof@pop.wwa.com (Mark T. Bohnhoff),
tapr-board@tapr.org (TAPR Board), wo5h@tapr.org (Dave Wolf TCET),
hholly@ais.net (Hap Holly), tapr-sys@tapr.org,
JBLOOM@ARRL.ORG (Jon Bloom), amsat-bb@amsat.org (AMSAT BB Mail Group),
dcc@tapr.org (Digital Comm Conf)
Message-ID: <199610241912.OAA00653@tapr.org>
Rendered body type: text/plain

1996 ARRL and TAPR Digital Communications Conference

(audio, photos, and story available)

Couldn't attend the 1996 ARRL and TAPR Digital Communications Conference
held in Seattle, Washington? Well - here is your opportunity to listen to
and see pictures from the conference.

All this available on: http://www.tapr.org

Lyle Johnson, WA7GXD, was the Saturday evening Banquet Speaker.
Lyle gave an exceptional talk regarding the future and past of amateur
radio. Both the transcript and audio from the talk are available.

If nothing else, you owe it to yourself to listen or read what
Lyle has to say.

Main Paper Sessions (Audio Segments)

Welcome to the DCC
Steve Stroh, N8GJN, Rod Stafford, KB6ZV, Greg Jones, WD5IVD,
and Keith Justice, KF7TP

Session 1a, 8:30am - 10:00am

Baseband Group Delay Equalization of IF Filters
Tom McDermott, N5EG

Amateur Radio Digital Voice Communications

Paul Rinaldo, W4RI

A 9600 Baud Modem for the LPT port
Keith Sproul, WU2Z for Wolf-Henning Rech, N1EOW

Constructing a Worldwide HF Data Network
Craig McCartney, WA8DRZ

Session 2a, 10:30am - 12noon

Strategies for Improving Wide-Area Networks
James Wagner, KA7EHK

DSP in HF Communications Systems
Tim Bagget, AA5DF

Packet and Internet
James Wagner, KA7EHK

Session 3a, 1:30pm - 3:00pm

Object-Oriented Modeling of a Satellite Teacking Software
Marc Normandeau, (Student Paper Award)

Circus of the Stars
Michelle Toon, KC5CGH (Student Paper Award)

WinAPRS: Windows Automatic Position Reporting System
Keith Sproul, WU2Z

Session 4, 3:30pm - 5:00pm

javAPRS: Implementation of the APRS Protocols in Java
Steve Dimse, KO4HD

Automatic Radio Direction Finding Using MacAPRS and WinAPRS
Keith Sproul, WU2Z

Progress of Coding Experiments
Phil Karn, KA9Q

Introductory Sessions

Introduction to Digital Communications
Greg Jones, WD5IVD

Introduction to HF Digital Communications
Johan Forrer, KC7WW

Introduction to Spread Spectrum
Steve Bible, N7HPR

Introduction to APRS
Keith Sproul, WU2Z

TAPR HF SIG

Overview of HF Simulator Theory
Tom McDermott, N5EG

HF Simulator Development Update
Johan Forrer, KC7WW

Quadtor Development Update
Johan Forrer, KC7WW

HF SIG Update

Johan Forrer, KC7WW

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
---
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: http://www.tapr.org/

November 1996

Original source file: tapr-bb.9611
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1996-11/TAPR-BB_1996-11.txt

1. TAPR Spread Spectrum STA Granted

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sat, 9 Nov 1996 01:28:37 -0600
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>,
        " Spread Spectrum "<ss@tapr.org>,
        "NETSIG  list   mailing"<netsig@tapr.org>,
        " AMSAT BB Mail Group "<amsat-bb@amsat.org>,
        "Bill  Westradio   Pasternak"<billwa6itf@aol.com>,
        "Len  KB7LPW   Winkler"<lenwink@indirect.com>,
        "Hap  KC9RP RAIN Holly"<hholly@ais.net>,
        "Dave Wolf TCET"<wo5h@tapr.org>, "Greg Jones WD5IVD" <wd5ivd@tapr.org>,
        "Rich CQ VHF"<NW2L@aol.com>,
        "Gagne, Jennifer,  N1TDY" <jgagne@arrl.org>,
        "Donald   Rotolo"<73227.2644@compuserve.com>,
        "Stan   Horzepa"<stanzepa@nai.net>,
        " Bob Hansen (TAPR) "<psr@tapr.org>,
        "Paul   Rinaldo"<prinaldo@interramp.com>,
        " TAPR SYS "<tapr-sys@tapr.org>
Message-ID: <v03007803aea9dae8aced@[208.134.134.42]>
Rendered body type: text/plain
```

TAPR's Spread Spectrum Special Temporary Authorization is Granted
November 8th, 1996

The FCC has granted a Special Temporary Authorization (STA) to Greg Jones, WD5IVD, and Dewayne Hendricks, WA8DZP, on behalf of TAPR (Tucson Amateur Packet Radio, Corp), regarding spread spectrum communications. On April 10th, 1996, TAPR requested a waiver of the rules and regulations governing Amateur Radio spread spectrum communications in order to conduct an experimental program to test spread spectrum emissions over amateur radio facilities on different bands.

Full details on the TAPR spread spectrum STA are available on its web page <http://www.tapr.org> under the Spread Spectrum area.

A Special Temporary Authorization (STA) is the authority granted to a permittee or licensee to permit the operation of a broadcast facility for a limited period at a specified variance from the terms of the station authorization or requirements of the FCC rules applicable to the particular class of station.

TAPR recently released a position statement on Spread Spectrum Technology Development which in part states, "TAPR believes that the technical facts support our conviction that conventional and spread spectrum systems can coexist without detriment to conventional systems on all frequencies from MF to EHF. To this end, TAPR will begin to research spread spectrum systems that will develop technology for future deployment." (<http://www.tapr.org/ss/>)

TAPR plans to continue its leading role in developing standards and technology for spread spectrum communications for the amateur radio community through discussion groups, cooperative efforts and experimental programs such as now being permitted by the recently granted STA. In particular, due to the rapid development of communications hardware and software, TAPR believes that the use of hybrid spread spectrum emissions, as well as spreading codes not envisioned by Section 97.311(d) of the Rules can be employed without causing harmful interference to other amateur radio operators.

TAPR was founded in 1982 as an international organization with interests in the areas of packet and digital communications. Today, TAPR continues as a membership supported nonprofit amateur radio research and development organization, and currently has more than 2,000 members worldwide. TAPR continues to develop kits for the amateur radio community and is working actively on publications and communications standards.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
---

e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: <http://www.tapr.org/>

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
-----

2. Fw: My Spread Spectrum Letter to FCC

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 28 Nov 1996 20:21:30 -0600
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03007804aec3f8b91e42@[128.83.113.65]>
Rendered body type: text/plain

Since Bob posted this on the vhf list, I don't have to copy and mail it out
to everyone now.

Bob sent this into the FCC the day after we got the STA. Dewayne's comment
on it was 'to bad amateurs don't understand the system.' Basically,
nothing should come of this....you don't ask for changes to a STA like a
rule making. We don't have to comment on it either. We have our STA and
the FCC will onyl worry about renewing it in 6 months -- they sure will not
want to make changes to it.

Greg

>> ----------
>> > From: Robert Carpenter <rcarpen@lan2wan.com>
>> > To: vhf@w6yx.stanford.edu
>> > Subject: My Spread Spectrum Letter to FCC
>> > Date: Thursday, November 28, 1996 5:17 PM
>> >
>> > I mailed the following letter about a week ago. I've delayed in
>posting
>> > it to allow the recipients to get their paper copy first.
>> >
>> > Bob Carpenter w3otc   rcarpen@Lan2Wan.com
>> >   Robert J. Carpenter, W3OTC
>> >   12708 Circle Drive
>> >   Rockville, MD 20850-3713
>> >
>> >   20 November 1996
>> >
>> > Chairman,
>> > Federal Communications Commission,
>> > Washington, DC 20554
>> >
>> > Dear Sir:
>> >
>> > On November 8, 1996, the Private Wireless Division of the FCC's
>Wireless
>> > Telecommunications Bureau modified the Special Temporary Authorization
>> (STA)
>> > issued to Tucson Amateur Packet Radio (TAPR). I feel that these
>> > modifications, unless altered, will seriously compromise the results of
>> any
>> > experimentation under this STA.
>> >
>> > The major thrusts of the STA modification are:
>> >
>> > a) allow Spread Spectrum (SS) transmissions on the amateur frequencies
>> above
>> > 50 MHz,
>> >
>> > b) allow the use of any spreading sequence,
>> >
>> > c) no longer require stations using SS to identify in a manner which
>can
>> be
>> > understood on conventional amateur receiving equipment.
>> >
>> > Continued is the requirement that test transmissions must be terminated
>> if
>> > they interfere with other amateur communication.
>> >
>> > There is widespread alarm among the many users of the heavily populated

>
>> > amateur bands between 50 and 450 MHz that SS transmissions will
>seriously
>> harm
>> > the present users. Thus it is very important that operation under the
>> subject
>> > STA be conducted in an open manner so that all amateurs can participate
>> and
>> > observe the results.
>> >
>> > I request that the FCC require that users of the TAPR STA post their
>> operating
>> > log, within 24 hours of each period of SS operation, on the well-known
>> TAPR
>> > site on the World Wide Web (www.tapr.org). The log information must
>> include:
>> > call letters of station, location, time, frequencies employed, power,
>> antenna,
>> > SS type, etc.
>> >
>> > This requirement would have a number of benefits:
>> >
>> > 1) without such a public record, other band occupants will have no way
>of
>>
>> > identifying the source of SS transmissions, should there actually be
>> > interference,
>> >
>> > 2) it would demonstrate the technical prowess of TAPR in fielding real
>> tests
>> > of real SS equipment,
>> >
>> > 3) without the open testing this requirement would encourage, the issue
>> of SS
>> > in amateur radio will remain very contentious and clouded in distrust
>and
>>
>> > misinformation,
>> >
>> > 4) it would demonstrate the serious and thorough nature of the tests
>> under the
>> > STA,
>> >
>> > 5) by making the SS operation public in nearly real time, it would
>reduce
>> the
>> > number of false reports of SS interference,
>> >
>> > 6) it would allow other users of the bands to correlate their
>> observations
>> > with the SS STA users (after the fact).
>> >
>> > I request that the Commission act immediately to add the above logging
>> and
>> > posting requirement to the TAPR STA. It would not hamper
>experimentation
>> in
>> > any way. It is not onerous. TAPR already possesses all of the
>necessary
>>
>> > facilities.
>> >
>> > Respectfully submitted,
>> >
>> >
>> > Robert J. Carpenter
>> >
>> > cy:
>> > Greg Jones, TAPR
>> > Paul Rinaldo, ARRL
>> >
>> >
>

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd

December 1996

Original source file: tapr-bb.9612
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1996-12/TAPR-BB_1996-12.txt

1. Update on GPS-20 Purchase

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 8 Dec 1996 13:15:41 -0600
To: "APRS SIG  list   mailing"<aprssig@tapr.org>,
        "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03007803aed0c2ddecd6@[208.134.134.42]>
Rendered body type: text/plain
```

For those on the current TAPR GPS-20 group purchase.

TAPR currently has 50 units on order. 75 are required to place the order
for 100 units with Garmin.

Full details:
http://www.tapr.org/gps/index.html

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: http://www.tapr.org/tapr

---

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd

---

2. TAPR Update

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 8 Dec 1996 15:03:22 -0600
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v0300781baed0d8f81fc4@[208.134.134.42]>
Rendered body type: text/plain
```

PC-DSP and PC-SIM for Windows TAPR Group Purchase
The purchase only need 2 (two) more people involved to complete. This is a
super package.

Check out: http://www.tapr.org/tapr/html/dsp93.pcdsp.html

====

Several changes have happened on the TAPR SIG Web Page. The main addition
has been the ability to change digest mode on or off for every group.

Check out: http://www.tapr.org/tapr/html/sigs.html#listserv

====

The TAC-2 Project has a web page on-line which shows the Alpha-1 board and
discusses the project.

Check out: http://www.tapr.org/tapr/html/tac2.html

====

The office has Trakbox units in stock. We expect to have about 30 TrakBox
units available between now and Dayton.

Check out: http://www.tapr.org/tapr/html/trakbox.html

====

The 1996 TAPR CD-ROM is sold out. TAPR is taking orders for the 1997 TAPR
CD-ROM, which is under constrcution now. Has several major improvements
under development. The price is not changing in 1997.

Check out: http://www.tapr.org/tapr/html/cdrom.html

====

Wireless Digital Communications: Design and Theory by: Tom McDermott, N5EG
is at the binders at this time. An announcement will be sent out when
books arrive at office and start shipping out.

Check out: http://www.tapr.org/tapr/html/pub.wdcdat.html

====

The new TAPR Mug has been going quick. Another order is being placed to
handle the demand.

Check out: http://www.tapr.org/tapr/html/taprmug.html

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
----
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: http://www.tapr.org
----

3. A few MIC-E Beta Spots Open

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 8 Dec 1996 17:39:11 -0600
To: "TAPR   APRS SIG"<aprssig@tapr.org>,
        "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v0300780daed0ff1f193f@[208.134.134.42]>
Rendered body type: text/plain

TAPR has room for a few additional beta-testers in the MIC-E beta test.

Submit an application using the MIC-E Beta Application, which can be found on:

http://www.tapr.org/tapr/html/mic-e.html

TAPR is only taking applications until Wed Dec 11th (5pm).

Anyone wanting to participate in these beta slots will have to pay with the
TAPR office by Visa/Mc ***once notified of being accepted*** by Friday (Dec
13th).

Do not call the TAPR office about the Beta spots until notified.

We will send out messages to everyone who submits an application by Thursday.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
----
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: http://www.tapr.org/tapr
----

4. North American Digital System Directory

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 16 Dec 1996 16:12:49 -0600
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>, " NetCode "<netcode@tapr.org>,
        regional_freq@tapr.org
Message-ID: <v03007804aedb7972789d@[208.134.134.42]>
Rendered body type: text/plain

North American Digital System Directory

The Tucson Amateur Packet Radio Corporation (TAPR), with the support of the
American Radio Relay League (ARRL), will begin providing at the TAPR Internet
site the information on digital systems that until now has been printed in

the annual ARRL Repeater Directory. Information on digital systems will not be published in the 1997-98 edition of the Repeater Directory, permitting the publication to better focus on its primary use as a guide to voice repeaters for traveling Amateurs.

In planning the 1997-98 edition, the ARRL concluded that the Repeater Directory was no longer the most effective medium for this information. Discussions involving various regional digital groups that provide data to the digital section of the Repeater Directory led to the conclusion that TAPR was the logical group to take on the task of a new North American Digital System Directory.

This new database system will describe systems used by amateur radio stations involved in digital communications in the United States, Canada, and Mexico. The Digital System Directory will be based on information provided by regional, state, and local organizations as well as individuals in a nearly real-time format. This should allow information to be maintained and updated more frequently than in a yearly publication. TAPR will also work with participating organizations to make this information available on TAPR's yearly CD-ROM as well as some future publication for local/regional groups to distribute.

The purpose of the Digital System Directory is not to manage, coordinate, or regulate the usage of digital systems, but to provide the most up to date and accurate listing of digital systems that can be provided. Neither is it a formal organization, but a mechanism to allow regional groups to provide and share information regarding digital systems.

The Digital System Directory is intended for use by individuals to further their enjoyment of the hobby and by organizations to help plan and develop digital networks.

Regional/Local groups including TwinsLAN, Texas Packet Radio Society, Miami Valley FM Association, Ohio Area Repeater Council, Puget Sound AR TCP/IP Group, Northern California Packet Association, Northern Illinois Packet Radio Frequency Council, Indiana Digital Experimenters Association, Central Lakeshore Experimenter's Digital Organization, HogNet Packet Radio Association, YCCC Sysops Association, and the Missouri Amateur Packet Radio Society have already begun to participate in the process. TAPR encourages other regional groups to support this project by contributing data from their respective areas.

For further information on the project and how to get involved, regional groups should check http://www.tapr.org/directory or send e-mail to Carl Estey, wa0cqg@tapr.org

---
Released on: 12-16-96
by: TAPR and ARRL

5. Update on NADSD Directory

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 17 Dec 1996 10:34:06 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing), regional_freq@tapr.org,
billwa6itf@aol.com (Bill Pasternak),
lenwink@indirect.com (Len Winkler),
mbohnhof@pop.wwa.com (Mark T. Bohnhoff),
tapr-board@tapr.org (TAPR Board), wo5h@tapr.org (Dave Wolf TCET),
hholly@ais.net (Hap Holly)
Message-ID: <199612171634.KAA10312@tapr.org>
Rendered body type: text/plain

Just as a fill to the recent announcement regarding the NADSD.

The creation of the NADSD was in response to the ARRL announcing that they were dropping the digital listing from the upcoming Repeater Directory.

It seems that some are reading the announcement in such a way as to infer that TAPR had something to do with the ARRL making the decision to drop the digital listing from the Repeater Directory. This was not the case. TAPR responded to the call from several regional groups, once the announcement was made by the ARRL as to their plans, and the on-line directory concept was created and moved to closure.

If you have digital information that would be useful in the North American Digital Systems Directory, please check http://www.tapr.org/directory

Cheers - Greg Jones, WD5IVD
President, TAPR

6. TAPR SS STA Application Available

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 22 Dec 1996 02:44:22 -0600
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>,
        " Spread Spectrum "<ss@tapr.org>,
        "TAPR Spread Sprctrum" <ss-sta@tapr.org>
Message-ID: <v0300783daee2a2d4daae@[208.134.134.42]>
Rendered body type: text/plain
```

TAPR SS STA Application On-Line

TAPR requested a Special Temporary Authority ('STA') to conduct an experimental program to test spread spectrum emissions over amateur radio facilities on April 10, 1996. On November 6, 1996, the Federal Communications Commission Wireless Telecommunications Bureau granted the TAPR request for an STA.

TAPR is making an application for participation in the STA available for any member of TAPR to use. The URL is: http://www.tapr.org/ss/tapr_sta.html

Please note that all areas of the application must be filled out. These will be reviewed by the STA holders and a committee within TAPR. The more detail you can provide in the general answer areas the better.

The STA holders reserve the right to add individuals to or remove individuals from the STA at anytime. The application will be used in order to determine eligibility in the STA as well as provide information to the database and final report of the STA.

Responsibilities of STA stations:

* Stations will be required to maintain the highest standards in operational practices.
* Stations will be required to submit a report before the end of the STA that will be used in the final report.
* Stations must have a dependable Internet e-mail service so that information and discussion regarding the STA can be held.
* Stations must hold at least a Technician Class license
* Stations must be aware that any transmissions conducted pursuant to the requested STA will be secondary in nature, and must cease immediately in the event of harmful interference.
* Participants must be a current member of TAPR.

For more information on TAPR check http://www.tapr.org
For more information on TAPR SS information check http://www.tapr.org/ss

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Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
---
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: http://www.tapr.org
---

7. TAPR Group Purchases on Freewave radios

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 22 Dec 1996 03:39:41 -0600
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>,
        " Spread Spectrum "<ss@tapr.org>,
        "TAPR Spread Sprctrum" <ss-sta@tapr.org>
Message-ID: <v0300783eaee2ad595420@[208.134.134.42]>
Rendered body type: text/plain
```

TAPR Group Purchases on Freewave radios

URL: http://www.tapr.org/ss

TAPR has worked an agreement with FreeWave Technologies, Inc. of Boulder, CO to make there 902-928Mhz 115Kbps radio available to the amateur radio community. This is an exciting deal and TAPR hopes to be make other High-Speed SS radios available to amateur radio operators in the future.

TAPR will be taking orders in batches of 50+ units and will try to make a buy at the end of each month, until such time as members no longer require radios.

These units will be useful under the current TAPR SS STA

(http://www.tapr.org/ss/tapr_sta.html). These radios can be used under part
15 rules after the TAPR SS STA expires or the amateur rules do not change
significantly enough for their use under Part 97 in the future.

Profits made from these group buys will be used to fund future TAPR
projects and to pay past and future TAPR regulatory efforts.

Technical Specifications:
   * Freewave DGR-115 spread spectrum transceivers
   * Frequency hopping spread spectrum
   * Uncompressed data rates of 115.2 KBaud (serial) 173kbaud on radio
   * Distances of 20 miles or more
   * 1 Watt output power
   * Bandpass Filter
   * All transceivers are assigned a unique electronic serial number
   * -40□ C to +60□ C temp range

See http://www.tapr.org/ss/freewave.html for full details and price.

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----
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: http://www.tapr.org
----

8. Wireless Digital Communications: Design and Theory

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 22 Dec 1996 03:48:22 -0600
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03007841aee2b30fabf5@[208.134.134.42]>
Rendered body type: text/plain

Wireless Digital Communications: Design and Theory

*** NOW AVAILABLE AT THE TAPR OFFICE ***

We just got the books and they look GREAT!

Wireless Digital Communications: Design and Theory
Tom McDermott, N5EG
334 pages.
ISBN: 0-9644707-2-1
Includes a 3.5" DSDD Disk containing programs used in book

http://www.tapr.org/tapr/html/pub.wdcdat.html

Preface

Amateur radio communication has progressed in many ways since its beginning
in the early 1900's. General communications progressing from spark to CW
and voice from AM to FM and SSB. Similarly, data communications as a mode
of amateur communications has progressed from using on-off keying (OOK) to
FSK, and from RTTY to more modern modes of communications (synchronous and
error-correcting). There has been a lack of good technical background
material in amateur radio literature on the principles and design of
synchronous digital modems.

The wealth and quality of literature in the professional world in the
subject area is astounding, but much of it may not be readily accessible to
the radio amateur, whether for reasons of advanced mathematics, or simple
lack of availability.

In writing this book, the aim has been to bring a concise group of topics
covering a broad spectrum of amateur synchronous digital communications
subjects to print in one place, and to make it readily accessible to the
radio amateur. This text aims to present the information in a clear and
straight-forward manner, with the maximum use of graphical and
computer-assisted aids, and with a minimum of rigorous mathematical theory.
However, digital communications deals with the application and solution of
statistical phenomenon, and a minimum background is necessary. Where
practical, the appendices provide short summaries of some of the important
mathematical concepts that will be needed in understanding certain areas.

Overall, the field of digital communications could be generally broken into two categories: bandwidth-limited communications and power-limited communications. Much of the professional literature focuses on the former, while in practice the amateur is many times concerned with the latter. This text focuses more on the subject of power-limited communications and emphasizes, through examples, the circuits and problems of the latter category of applications.

With time and the increasingly more crowded HF bands, however, the radio amateur will adopt more sophisticated data modems, offering higher throughput and narrower bandwidth operation under the demanding propagation conditions of the HF medium. This trend has already started and should accelerate as the cost of technology, particularly Digital Signal Processing, continues to decrease. So, this text includes information on the subject areas of DSP-based modem filters, and on forward-error-correcting codes, whose use by the radio amateur will become dominant within a few short years. While the data rate of VHF and UHF communications will increase, it is expected that, for the radio amateur, these will remain power-limited applications for some time.

In the preparation of this text, I have relied on the study of a number of exceptionally well written textbooks, and to the IEEE literature in the area, and these should be consulted whenever more depth or broader interest is desired. I would like to thank the reviewers of the text for many helpful comments, related both to the readability of the material, ...

(more in the book!)

Thomas C. McDermott, N5EG

Dallas, Texas August 25, 1995

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
---
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: http://www.tapr.org
---

9. FCC Delays New RF-Exposure Rules

From: wd5ivd@tapr.org
Date: Tue, 24 Dec 1996 19:26:53 -0600
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v0300780aaee632f4b207@[129.120.111.42]>
Rendered body type: text/plain

FCC Delays New RF-Exposure Rules

The FCC has postponed for one year, until January 1, 1998, the date for hams to comply with its new RF-exposure regulations. The ARRL was among those requesting the delay this fall. The League said that the additional time was needed for the FCC to draft implementation guidelines that amateurs could use to help them comply with the regulations--released on August 1, 1996 as ET Docket 93-62. Among other things, the regulations would require hams running 50 W PEP or more to conduct "routine RF radiation evaluations" to determine if RF fields were sufficient to cause human exposure to RF radiation levels in excess of those specified in the proposed regulations. The ARRL also has asked the FCC to reconsider the 50-W threshold, but the FCC report (DC 96-112) extending the compliance deadline did not address that issue.

The FCC announcement--which the ARRL obtained just before noon on Christmas Eve--noted that more time would be needed for affected licensees to determine that they comply with the new requirements. The extension also will allow required changes to Amateur Radio operator examinations to be made at the time other, routine revisions are made between now and July 1, 1998. In announcing the extension, the FCC said it disagreed with those petitioners who suggested that the time extension "will have significant adverse effects on public health."

Since the FCC announced the RF-exposure regulations, the ARRL has worked with technically knowledgeable volunteers to assist the staff, the RF Safety Committee and the FCC in coming up with a workable ham radio approach toward RF safety. ARRL Laboratory Supervisor Ed Hare, KA1CV--the ARRL HQ liaison to the ARRL RF Safety Committee--has spearheaded the ARRL's effort. "The ARRL is very pleased that the FCC extended the compliance date," Hare said. "As

all parties involved tried to fully understand the new requirements, it soon became obvious that neither the FCC nor the ham radio community was ready for the January 1, 1997, implementation deadline."

Hare said the delay will give both the FCC and hams more time to better understand the implications of the rules and will give hams an opportunity to evaluate their stations as the regulations will require (see "The FCC's New RF-Exposure Regulations," QST, Jan 1997, p 47).

The entire text of Report DC 96-112 may be found on the ARRLWeb at http://www.arrl.org/fcc/dc96-112.html (or click on What's New or RF Safety News). See Happenings in February QST for additional information.

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10. TAPR's new Club Call: KT7APR

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 24 Dec 1996 22:04:11 -0600
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v0300780eaee656620a05@[129.120.111.42]>
Rendered body type: text/plain

TAPR would like to announce its new club call:

KT7APR

Paul Newland, AD7I, is currently trustee of the call.

I would like to thank Paul Newland, AD7I, and Bob Nielsen, W6SWE, for their work on this project. The process began shortly after Dayton and we are all glad to have the new club callsign.

TAPR wishes everyone the very best during these holidays.

Cheers - Greg Jones, WD5IVD

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
---
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org web: http://www.tapr.org
---

11. FCC extends transition period for RF environmental effects

From: wd5ivd@tapr.org
Date: Wed, 25 Dec 1996 03:37:52 -0600
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>,
" AMSAT BB Mail Group "<amsat-bb@amsat.org>
Message-ID: <v03007801aee6a60c58bd@[129.120.111.42]>
Rendered body type: text/plain

FCC EXTENDS TRANSITION PERIOD FOR DETERMINING COMPLIANCE WITH
NEW REQUIREMENTS FOR EVALUATING THE
ENVIRONMENTAL EFFECTS OF RF ELECTROMAGNETIC FIELDS
FROM FCC-REGULATED TRANSMITTERS
(ET DOCKET NO. 93-62)

The Commission has amended its rules to extend the transition period for applicants and station licensees to determine compliance with the new requirements for evaluating the environmental effects of radiofrequency (RF) electromagnetic fields from FCC-regulated transmitters.

In 1985, the Commission adopted rules for evaluating the environmental effects of RF electromagnetic fields produced by FCC-regulated transmitters. In August 1996, the Commission amended those rules by provided for the use of new guidelines and methods, and established a transition period, until January 1, 1997, for applicants and stations to come into compliance with the new requirements.

The American Radio Relay League, Inc., Ameritech Mobile Communications, Inc., AT&T Wireless Services, Inc., BellSouth Corporation, Paging Network, Inc., the Personal Communications Industry Association and U S West filed petitions asking the

Commission to extend the transition period beyond January 1, 1997, arguing that the existing transition period failed to provide adequate time for affected parties to achieve compliance with the new rules.

The Commission stated that, based on the petitions and comments, it is clear that most station applicants will need additional time to determine that they comply with the new requirements. The Commission noted that an extension of the transition period would: 1) eliminate the need for the filing and granting of individual waiver requests; 2) allow time for applicants and licensees to review the results of the decisions that will be taken in the near future addressing other issues raised in petitions; and 3) permit applicants to review a revised information bulletin and make the necessary measurements or calculations to determine that they are in compliance.

The Commission indicated that it did not concur with petitioners who suggest that granting any extension of the transition period will have significant adverse effects on public health.

Therefore, the Commission has extended the transition period to September 1, 1997, for most radio services. For the Amateur Radio Service, the transition period has been extended to January 1, 1998. Additionally, the Commission will allow changes to amateur radio operator license examinations to be made as the examinations are routinely revised between now and July 1, 1998. The Commission believes that these extensions are necessary so that applicants and licensees will have adequate time to understand the new requirements and to ensure that their facilities are in compliance with them.

Action by the Commission December 23, 1996, by First Memorandum Opinion and Order (FCC 96-487). Chairman Hundt, Commissioners Quello, Ness, and Chong.

-FCC-

News Media contact: Patricia A. Chew at (202) 418-0500.
Office of Engineering and Technology contact: Rick Engelman at (202) 418-2445 and Robert Cleveland (202) 418-2422.

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Dewayne Hendricks, WA8DZP ! Internet: dewayne@warpspeed.com
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January 1997

Original source file: tapr-bb.9701
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1997-01/TAPR-BB_1997-01.txt

1. [TAPR-BB:282] ARRL Washington Opening

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 9 Jan 1997 10:21:23 -0600
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v03007807aefacb788cde@[192.168.1.2]>
Rendered body type: text/plain

```
>Date: Thu, 9 Jan 1997 09:55:52 -0600 (CST)
>Reply-To: prinaldo@mindspring.com
>Originator: tapr-bb@tapr.org
>Sender: tapr-bb@tapr.org
>Precedence: bulk
>From: "Paul L. Rinaldo" <prinaldo@mindspring.com> (by way of Greg Jones)
>To: wd5ivd@tapr.org
>Subject: [TAPR-BB:282] ARRL Washington Opening
>X-Comment: Tucson Amateur Packet Radio  Announcements
>
>This message was submitted by "Paul L. Rinaldo" <prinaldo@mindspring.com> (by
>way of Greg Jones, to list tapr-bb@tapr.org. If you forward it back to the
>list, it will be distributed without the paragraphs above the dashed line. You
>may edit the Subject: line and the text of the message before forwarding it
>back.
>
>If you edit the messages you receive into a digest, you will need to remove
>these paragraphs and the dashed line before mailing the result to the list.
>Finally, if you need more information from the author of this message, you
>should be able to do so by simply replying to this note.
>
>---------------------- Message requiring your approval ----------------------
>Sender: "Paul L. Rinaldo" <prinaldo@mindspring.com> (by way of Greg Jones,
>Subject: ARRL Washington Opening
>
>The ARRL Washington office has an immediate opening for an engineer with
>spectrum management and government experience or willing to learn. The
>incumbent would deal with agencies of the federal government and
>international organizations. Spanish language a plus. If interested, please
>send resume to Robert Boucher, ARRL 225 Main Street, Newington, CT 06111,
>email: rboucher@arrl.org.
>
>73, Paul, W4RI
>


-----
Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
-----
```

2. ARRL Washington Opening

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 9 Jan 1997 11:05:04 -0600
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v0300780baefad5acf34d@[192.168.1.2]>
Rendered body type: text/plain

```
Subject: ARRL Washington Opening

The ARRL Washington office has an immediate opening for an engineer with
spectrum management and government experience or willing to learn. The
incumbent would deal with agencies of the federal government and
international organizations. Spanish language a plus. If interested, please
send resume to Robert Boucher, ARRL 225 Main Street, Newington, CT 06111,
email: rboucher@arrl.org.

73, Paul, W4RI
```

3. U-NII Band Public Notice

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Fri, 10 Jan 1997 06:04:53 -0600
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>

Message-ID: <v03007804aefbe05b258b@[192.168.1.2]>
Rendered body type: text/plain

GENERAL ACTION January 9, 1997 Report No. GN 97-3

THE FCC MAKES SPECTRUM AVAILABLE FOR NEW UNLICENSED EQUIPMENT

U-NII Devices Will Facilitate Access to the National Information Infrastructure

(ET Docket No. 96-102)

The FCC today made available 300 MHz of spectrum for Unlicensed National Information Infrastructure (U-NII) devices that will provide short-range, high speed wireless digital communications. The Commission stated that in making available this spectrum it anticipates that these new devices, which do not require licensing, will support the creation of new wireless local area networks (LANs) and facilitate access to the information highway. The Commission said that the new rules will foster the development of a broad range of new devices, stimulate the growth of new industries, and promote the ability of U.S. manufacturers to compete globally by enabling them to develop unlicensed digital products for the world market. The U-NII spectrum is located at 5.15 - 5.35 GHz and 5.725 - 5.825 GHz.

The Commission said that availability of this spectrum for U-NII devices will help meet growing communications demands resulting from the development of new digital technologies. U-NII devices may also provide a means for educational institutions, libraries, and health care providers in rural areas, to connect to basic and advanced telecommunications services, as envisioned by the Telecommunications Act of 1996. Educational institutions, for example, could form inexpensive wireless computer networks between classrooms, thereby providing cost-effective access to an array of multimedia services on the Internet. In addition, unlicensed wireless networks could help improve the quality and reduce the cost of medical care by allowing medical staff to obtain on-the-spot patient data, X-rays, and medical charts.

The Commission emphasized the need for U-NII devices to share spectrum with incumbent services without causing radio interference to those services. Accordingly, the Commission made available a total of 300 MHz of spectrum for U-NII devices. This spectrum is shared with other authorized operations. As a result of spectrum sharing concerns, different power limits will apply to each of the bands as follows: 200 milliwatts EIRP (5.15-5.25 GHz); 1 watt EIRP (5.25-5.35 GHz); and 4 watts EIRP (5.725-5.825 GHz).

The Commission affirmed the tentative conclusion it reached in the NPRM that U-NII devices should be covered by Part 15 of the FCC rules, stating that unlicensed Part 15 status will promote technical and operational flexibility, facilitate spectrum reuse, and provide protection to incumbent and primary operations.

The Commission also affirmed its tentative conclusion to adopt the minimum technical rules necessary to prevent interference to other services, to ensure that the spectrum is used efficiently, and to permit significant flexibility in the design and operation of U-NII devices. The rules adopted today specify power and emission limits, radio frequency hazard requirements, and other basic technical matters. The Commission declined to adopt a channeling plan, spectrum modulation efficiency requirement, or a spectrum etiquette.

Action by the Commission January 9, 1997, by Report and Order (FCC 97-5). Chairman Hundt, Commissioners Quello, Ness, and Chong, with Commissioner Ness issuing a separate statement.

-FCC-

News Media contact: Rochelle Cohen at (202) 418-0500.
Office of Engineering and Technology contacts: Tom Derenge at (202) 418-2451 and Fred Thomas at (202) 418-2449.

SEPARATE STATEMENT OF COMMISSIONER SUSAN NESS

Re: Operation of Unlicensed NII Devices in the 5 GHz Frequency Range

Today the Commission opens another door to the wireless future by
authorizing a new category of unlicensed, short-range, broadband digital
devices.

As a result, wireless local area network (LAN) and other equipment can now
be developed to connect our computers, laptops, and personal digital
assistants (PDAs) to each other, to the Internet of today, and to the
global information infrastructure of tomorrow. In many buildings,
including schools, a wireless connection will be a cost-effective
alternative to pulling wire through walls and ceilings.

We are providing a total of 300 megahertz of spectrum for these devices.
This generous amount will permit substantial experimentation with
technologies and features, and will support widespread use of these devices
in the future.

While this spectrum is shared with existing services, our technical rules
will permit these devices to operate without causing harmful interference.
This is an example of how unlicensed devices and spectrum sharing can
increase the efficient use of our spectrum.

This equipment has not yet been developed and tested, but our spectrum
allocation today moves it forward. The bands selected are consistent with
the European High Performance Local Area Network (HIPERLAN) potentially
enabling such devices to be exported.

While it is too early to know which technologies and devices might succeed
in the marketplace, the potential is created for U.S. leadership in a whole
new world of high-tech digital wireless products.

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Dewayne Hendricks, WA8DZP ! AOL: HENDRICKS
Warp Speed Imagineering   ! Internet: dewayne@warpspeed.com
~~~~~~

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
-----

4. Update on Freewave Group Purchase

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 19 Jan 1997 12:48:38 -0600
To: " Spread Spectrum "<ss@tapr.org>,
       "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v0300780aaf08180c5d9a@[208.134.134.42]>
Rendered body type: text/plain

The purpose of this message is to report to you some bad news concerning
the special purchase deal that TAPR had arranged with FreeWave
Technologies, Inc. (FW) of Boulder, CO.

First, as most of your are aware, TAPR had negotiated a special bulk
purchase agreement with FW, which allowed us to offer the FW DGR-115 Part
15.147 spread spectrum radio to our members who are participating in the
TAPR Spread Spectrum (SS) STA project, at a price which was below the
normal retail price for the unit of $1250. An initial 'beta' order was
placed the first of December with the purpose of getting units so that the
radio could be evaluated to detemine which options we wanted to request,
documentation for common interfaces written, and we could get the purchase
process setup with FreeWave. When the order was placed, we were told that
we could expect delivery before the end of 1996. However, when we finally
received a confirmation of our order from FW, we were informed that we
would not receive delivery of the units until January 17, 1997.

The later delivery from FW caused us to revise our plans and we decided to
start taking orders for the radio from the SS STA participants. We made
this decision due to the fact that our current STA term is only six months
and although we expect that it will be renewed, we didn't feel that we
could waste any time in getting hardware into the hands of our STA
participants.

13 days ago, we were informed that FW has cancelled the special purchase
agreement with TAPR and that TAPR will receive no other units from FW other

than the initial units that we purchased in our first 'beta' order. Since that time, we have been trying to resolve the issue with FW, but have made no progress on the matter to this date. As many of you have noted, there was a special web page discussing the purchase. We removed the links and later the page when the discussions with FreeWave were not going anywhere. TAPR will be notifying everyone that had signed up for the $399 version of the purchase that it has been cancelled and no money will be deposited or cashed, since no order can be placed with FreeWave. Any checks for radios will be mailed back.

January 17 is now past and we still have no word from FW as to when we can expect delivery of the initial units that we have on order. Messages sent over the last 7 days have not been responded back to by anyone at FW. If I do not hear back by Monday I will call them. If that does not result in a positive solution the next step will be to involve TAPR's lawyers in the situation. I believe we will get the initial DGR-115 radios without modifications as contracted by FW in December, but the lack of communications on FW part is disheartening to say the least.

I regret this turn of events and you can be assured that everyone involved is attempting to resolve the issues. We are also working on other alternatives which would allow TAPR to offer spread spectrum radios to our STA participants at an 'affordable' price. We will be posting updates on this situation as it develops on our various mailing lists and on the TAPR web site.

Greg Jones, WD5IVD
Pres. TAPR

5. Computer Chronicles shows TAPR Web Site!

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Fri, 24 Jan 1997 16:26:17 -0600
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Cc: " TAPR SYS "<tapr-sys@tapr.org>
Message-ID: <v0300781daf0ee603f2f0@[208.134.134.40]>
Rendered body type: text/plain

If you watch the "Computer Chronicles" then look for the TAPR web site to appear in the 1418 issue of the production!

<http://www.pctv.com/pctv/shows/Chronicles/96-97/1418/1418.html>

Cheers - Greg

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
-----

6. Update on current GPS-20 Group Purchase

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 28 Jan 1997 14:52:21 -0600
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>,
        "TAPR   APRS SIG"<aprssig@tapr.org>
Message-ID: <v0300780aaf141711bb4e@[208.134.134.40]>
Rendered body type: text/plain

Dorothy, at the TAPR office, reports that we need another 20 or so orders for the current GPS-20 group purchase to move forward.

Cheers - Greg

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
-----

7. Amsat-NA annual Meeting & Space Symposium

From: Greg Jones <wd5ivd@tapr.org>
Date: Thu, 30 Jan 1997 23:50:30 -0600
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03020720af173889ce12@[208.134.134.40]>
Rendered body type: text/plain

Attached is the First Call for Papers for the 1997 Amsat Annual Meeting
and Space Symposium.

73 de
Robin Haighton VE3FRH

To: All
From: W.H.Chandler<ve3whc@amsat.org>
Subject: Amsat-NA Annual Meeting & Space Symposium

The 1997 AMSAT-NA annual meeting and space symposium will be held on
Oct.17-19,1997 at
the Airport Delta Hotel in Toronto,Ont.Canada. This is the first call for
papers to authors who
wish to present papers at this event. Topics for all amateur satellite
disciplines are sought from
the AMSAT community. Authors and titles are requested by March 1st with
abstracts by June
1st. Final versions are due by August 1st. We also encourage those not able
to attend to consider
a paper for publication in the Proceedings of the symposium. Submissions
and enquiries should
be made to:

Wayne Chandler,VE3WHC
By internet:ve3whc@amsat.org
By mail:W.H.Chandler
Box.6,Carlisle,Ont.,L0R1H0.
Canada.

February 1997

Original source file: tapr-bb.9702
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1997-02/TAPR-BB_1997-02.txt

1. [TAPR-BB:302] Digital Web-based Directory is real (fwd)

From: Greg Jones <wd5ivd@tapr.org>
Date: Thu, 6 Feb 1997 22:49:11 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199702070449.WAA17149@tapr.org>
Rendered body type: text/plain

Sender: Carl Estey <cestey@millcomm.com>
Subject: Digital Web-based Directory is real

After less than 24 hours since the TAPR NADSD team sent notice to the 65 registered data providers that the on-web site was ready for uploading data, many States now have data ready for you to view on the TAPR Web site. It is exciting to see the terrific interest in this project - and the immediate response of so many database keepers and digital coordinators. To each of you - a BIG thanks.

If you haven't visit the web site, take a few minutes to browse around at http://www.tapr.org/directory

Also, a BIG thanks to TAPR President Greg Jones, WD5IVD who has had the vision and drive to carry this project forward. Behind the scenes, Greg has created the database, entered all the group info and established the directories for each group. This project would not have happened without him. Thanks, Greg!

Since the data providers have no limits on how often they up-date their info, you should periodically check for new listings in the areas you are interested in.

Oh yes .... we still need people to provide data. Look over the participants State list - if there is no coverage shown in your area, please consider registering and becoming a NADSD data provider. See the web site for details.

The only problems we have discovered have resulted from providers not following the field definitions described on the web site. The database looks for things at a particular place and in a specific sequence - anything else results in your listings looking badly.

We look forward to seeing your data on the North American Digital Systems Directory (NADSD).

Best Wishes
The TAPR NADSD Team

Carl Estey <cestey@millcomm.com>

2. ARLB008 Comments needed, Little LEO

From: Greg Jones <wd5ivd@tapr.org>
Date: Fri, 14 Feb 1997 18:59:15 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199702150059.SAA24357@tapr.org>
Rendered body type: text/plain

Forwarded message:
Subject: ARLB008 Comments needed, Little LEO
From: w1aw@arrl.org
Organization: American Radio Relay League
Date: Fri, 14 Feb 1997 19:12:57 EST

SB QST @ ARL $ARLB008
ARLB008 Comments needed, Little LEO

ZCZC AG08
QST de W1AW
ARRL Bulletin 8 ARLB008
>From ARRL Headquarters
Newington CT February 14, 1997
To all radio amateurs

SB QST ARL ARLB008
ARLB008 Comments needed, Little LEO

Commercial satellite interests seeking access to bands below 1 GHz--including amateur allocations at 146 and 430 MHz--now have added 220 MHz to their ''wish list.'' For the first time, Little LEO (low-earth-orbiting satellite) interests have proposed including 219-225 MHz in their list of desired allocations for the non-voice, non-geostationary (NVNG) mobile-satellite service (MSS). The move was contained in the industry's so-called ''flexible allocation proposal,'' delivered at the February 13, 1997, meeting of FCC Informal Working Group (IWG) 2A. Little LEO targets now include 146 to 148, 219 to 225 and 430 to 450 MHz. The ARRL and AMSAT were among those objecting to the concept, and the League is urging those who agree with their position to comment to the FCC by March 4. IWG-2A has been preparing draft proposals for the 1997 World Radiocommunication Conference (WRC-97). These will be reviewed during a March 5 meeting of the FCC's WRC-97 Industry Advisory Committee that is preparing draft proposals for consideration by the United States as it gets ready for WRC-97

The ARRL and AMSAT statement said the latest proposal affecting amateur allocations in the 219 to 225 MHz segment came ''at the last possible moment'' and ''without any technical support whatsoever.'' The League and AMSAT pointed out that the little LEO proponents have had more than a year to complete a technical study of the possibilities of sharing with the amateur services in the 144 to 148 MHz and 420 to 450 MHz bands. ''They have not demonstrated compatibility for sharing these amateur bands but over the evolution of their document have proposed various 'new ideas' for use of these bands.''

The little LEO flexible allocation strategy for WRC-97--submitted as IWG-2A/86 (Rev. 6)--is to propose broad allocations. The apparent theory is that most administrations would find reasons to oppose little LEO use of specific bands in the crowded spectrum below 1 GHz, but that a broad allocation would permit different implementations in different countries depending on local circumstances.

At the February 13 meeting, a coalition of spectrum interests--including land mobile, amateur, broadcasting, and military--opposed the flexible allocation concept on three grounds: that the concept is simply an invention to avoid performing technical sharing studies that would demonstrate the unfeasibility of sharing; that it is inconsistent with decades of ITU allocations practices; and that, if adopted, the concept would be counter to US interests. The coalition document is identified as IWG-2A/107.

The ARRL and AMSAT submitted a further statement of opposition, citing the absence of any technical studies that might support sharing with the amateur service or the amateur-satellite service and pointing out that the little LEOs have completely mischaracterized the nature of ITU Resolution 640 regarding the use of certain amateur bands in the event of natural disasters. The ARRL/AMSAT paper, revised to reflect opposition to the late proposal to include 219-225 MHz, is identified as IWG-2A/108 (Rev. 1).

Amateurs also might find interesting the comments of the Department of Defense, identified as IWG-2A/101 (Rev. 1). These address the 430 to 450 MHz segment the Little LEOs seek to share.

Anyone wishing to register support for the ARRL/AMSAT submission should send a brief e-mail message to wrc97fcc.gov. The Subject line should say ''Reference No. ISP-96-005 IWG-2A.'' A simple statement to this effect, ''I support the ARRL/AMSAT opposition to the NVNG MSS flexible allocation proposal,'' will be included in the public record and will help to drive home the point that there is broad-based opposition to poorly conceived sharing proposals.

Please note. The proposals the League opposes are not FCC proposals, nor are they endorsed by any other branch of the government. They are industry proposals. The League's objective is to demonstrate there is broad citizen opposition to the industry proposals, so the government will not adopt them as US proposals. So, please don't ''flame'' the FCC if you comment.

Additional arguments or evidence also is welcome. Important. Comments should reach the FCC no later than March 4, 1997.

The complete ARRL/AMSAT opposition statement and other comments will
be posted by February 15 on the ARRLWeb page, http://www.arrl.org/
under Band Threat News.
NNNN
/EX

3. THE FCC, INTERNET SERVICE PROVIDERS AND ACCESS CHARGES

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 18 Feb 1997 19:06:22 -0600
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v0300780faf30026258db@[192.168.1.2]>
Rendered body type: text/plain

THE FCC, INTERNET SERVICE PROVIDERS AND ACCESS CHARGES

This fact sheet offers informal guidance on an issue that has generated
a great deal of public interest. For more specific details about the
proceedings currently before the Commission, please visit our web site (
http://www.fcc.gov/isp.html) or public reference room or call our
duplicating contractor for a copy of CC Docket Numbers 96-262, 94-1,
91-213 and 96-263.

The Federal Communications Commission (FCC) has requested public comment
on issues relating to the charges that Internet Service Providers (ISPs)
and similar companies pay to local telephone companies.

On December 24, 1996, the FCC opened a proceeding to reform the system
of interstate access charges. Each long distance telephone call you make
includes per-minute fees that your long distance carrier pays to the
originating and terminating local telephone companies over whose
facilities that call also travelled. Those fees, which are designed to
recover the costs to local telephone companies for use of their
facilities, are referred to as "access charges."

As part of this proceeding, the FCC sought comment on the treatment of
ISPand other "enhanced service providers" that also use local telephone
companies' facilities. Since the access charge system was established in
1983, enhanced service providers have been classified as "end users"
rather than "carriers" for purposes of the access charge rules, and
therefore they do not pay the per-minute access charges that
long-distance companies pay to local telephone companies.

This issue is being considered on two different tracks.

I. Notice of Proposed Rulemaking on Access Charge Reform

The Notice of Proposed Rule Making (NPRM) on Access Charge Reform seeks
comment on proposals to restructure the entire system of access charges
paid to local telephone companies. The Commission is seeking to make the
access charge system more consistent with the development of local
competition in the telephone industry, and with principles of economic
efficiency.

As part of this process, the Commission considered whether enhanced
service providers, such as ISPs, should be required to pay interstate
access charges. The Commission tentatively concludes that ISPs should
not be subject to access charges as currently constituted.

If you want to learn more about this issue you should read paragraphs
282 through 290 in the Notice of Proposed Rulemaking (the rest of the
document covers other issues). You can also access this document on the
FCC's Web site, or you can obtain this section of the document by
calling our fax on demand system at 202/418-2830 and requesting document
numbers, 96-262, 94-1, 91-213 and 96-263.

The final deadline for comments on the Notice of Proposed Rulemaking is

Friday, February 14, 1997.

You can submit formal comments by delivering or mailing five copies to: Federal Communications Commission, Office of the Secretary, Room 239, 1919 M Street, NW, Washington, D.C. 20554. You can also send informal comments via email. If your email concerns the question of whether Internet and other enhanced service providers should pay access charges, it should be addressed to isp@fcc.gov. If your email concerns other issues in the Access Reform NPRM, it should be addressed to access@fcc.gov.

II. Notice of Inquiry On Internet and Interstate Information Services

In a Notice of Inquiry (NOI) launched with this same Access Reform proceeding, the FCC is seeking to identify what policies would best facilitate the development of the high-bandwidth data networks of the future, while preserving efficient incentives for investment and innovation in the underlying voice network. The NOI does not make any specific proposals, but seeks comment generally on the implications of information services such as Internet access for the telephone network.

If you want to learn more about this issue you should read paragraphs 311 through 318, the NOI contained within the Access Reform document. You can also obtain this document from the FCC's Web site, or you can obtain this section of the document by calling our fax on demand system at 202/418-2830 and requesting document numbers, 96-262, 94-1, 91-213, and 96-263.

The deadline for comments on the Notice of Inquiry is March 24, 1997. Reply comments, submitted in response to the initial round of comments, will be accepted through the close of business on April 23, 1997.

You can submit formal comments by delivering or mailing five copies to: Federal Communications Commission, Office of the Secretary, Room 239, 1919 M Street, NW, Washington, D.C. 20554. You can also send informal comments via email by addressing them to isp@fcc.gov.

Frequently Asked Questions on Internet Services and Access Charges

Q: Does the FCC regulate the rates charged by Internet Service Providers (ISPs)?

A: No. ISPs are considered "enhanced service providers" under FCC rules. The FCC does not regulate the rates that enhanced service providers charge to their subscribers.

Q: How does the FCC regulate the rates that local telephone companies charge to ISPs?

A: ISPs purchase local phone lines so that customers can call them. Under FCC rules, enhanced service providers ISPs are considered "end users" when they purchase services from local telephone companies. Thus, ISPs pay the same rates as any other business customer, and these rates are set separately in each state. By contrast, long-distance companies are considered "carriers," and they pay interstate access charges regulated by the FCC.

Q: How are access charges different from the rates ISPs pay now?

A: Today, ISPs typically purchase "business lines" from local phone companies. Business lines usually include a flat monthly charge, and a per-minute charge for making outgoing calls. Because ISPs receive calls from their subscribers rather than making outgoing calls, ISPs generally do not pay any per-minute charges for their lines, which is one reason many ISPs do not charge per-minute rates for Internet access. Access charges, by contrast, include per-minute fees for both outgoing and incoming calls. The rate levels of interstate access charges are also in many cases higher than the flat business line rates ISPs pay today.

Q: Have local phone companies requested authority from the FCC to charge per-minute rates to ISPs?

A: Since 1983, there has been an ongoing debate about whether enhanced service providers should be required to pay access charges, based on the contention that these companies use local networks in the same manner as long-distance carriers. In June 1996, four local telephone companies (Pacific Bell, Bell Atlantic, US West, and NYNEX) submitted studies to the FCC concerning the effects of Internet usage on these carriers' networks. The companies argued that the existing rate structure did not reflect the costs imposed on local telephone companies to support Internet access, and that Internet usage was causing congestion in part of the local network. In connection with these studies and other pleadings, several local phone companies have asked the FCC for authority to charge interstate access charges to ISPs, although they have not filed a formal petition for rulemaking.

Q: Is the FCC considering allowing local phone companies to impose access charges on ISPs?

A: The FCC has requested public comment on whether ISPs should pay current access charges, and more generally on how Internet and interstate information services that use local telephone networks should be treated. The FCC's initial proposal is that ISPs should not be required to pay current access charges, but the Commission has made no final decisions.

Q: On what issues is the FCC asking for public comment?

A: In the Notice of Proposed Rulemaking, the FCC is asking for comment on whether ISPs and other enhanced service providers should pay the access charges now paid by long-distance companies.

In the Notice of Inquiry, the FCC is asking for comment on how to create incentives for companies to make the most efficient use of the telephone network for Internet and other information services, and on the impact of different rate structures for ISPs on network usage and deployment of new technologies.

For more specific questions, see the Access Reform document itself. The NPRM and NOI are part of the same document, which is available on the FCC Web site at http://www.fcc.gov/isp.html.

Q: What is the difference between a Notice of Inquiry (NOI) and a Notice of Proposed Rulemaking (NPRM)?

A: A NOI is the earliest step in the FCC's process and typically asks questions in an effort to gather enough information to make informed proposals on a given topic. A NPRM is a request for comment on specific proposals made by the Commission. After the FCC reviews the comments filed in response to an NPRM, the FCC can issue a Report and Order adopting new rules.

Q: Is the FCC worried about the effects of different pricing structures on the ISP industry, and on usage of the Internet?

A: Yes. The Commission expressed concern about the effects that imposition of access charges could have on the competitive ISP marketplace, and also noted that the Internet would likely not have grown so rapidly in recent years if most users had been required to pay per-minute rates for Internet access. At the same time, local telephone companies have argued that per-minute rates would more accurately reflect the costs that ISPs impose on the network, and would provide sufficient revenues to fund network upgrades needed to more efficiently handle data traffic.

Q: What are the deadlines for filing comments?
A: For the NPRM, which asks whether ISPs should pay current access charges, the final deadline is February 14, 1997.

For the NOI, which asks for comment more generally about the implications of Internet and interstate information services, the comment deadline is March 24, 1997, and the reply deadline is April 23, 1997.

Please note that both sets of deadlines have been moved back from what was originally established in the Access Reform document released in December 1996, in response to petitions for extensions of time to file comments.

Q: How do I file comments on this issue?

A: You can submit formal comments by delivering or mailing five copies to: Federal Communications Commission, Office of the Secretary, Room 239, 1919 M Street, NW, Washington, D.C. 20554. Your comments must include the docket numbers, 96-262. 94-1, 91-213, and 92-253. More information on filing formal comments is available on the FCC Web site at http://www.fcc.gov/ccb/.

Because of the importance of these issues to the Internet community, the FCC has also established an email box for informal comments at isp@fcc.gov.

Q: Will comments filed by other parties be available for review?

A: Formal comments are available for review in the FCC Reference Center in Washington DC. In addition, we will make available on the FCC Web site at http://www.fcc.gov/; any copies of formal comments we receive in electronic form.

Q: Is the FCC considering "surcharges" or "taxes" for use of the Internet or online services?

A: No. The FCC has sought comment on whether ISPs should be treated as end users or carriers, and has proposed initially to keep the current system in place. The debate involves charges levied by local phone companies, not government taxes.

Q: Is this the "FCC modem tax" that has been floating around the Internet in various forms for several years?

A: The "modem tax" referred to a proposal in 1987 to require enhanced service providers to pay interstate access charges, which at that time were significantly higher than they are today. The 1987 proposal was abandoned in 1988. The current Access Reform proceeding is entirely separate, and the FCC has specifically proposed not to require enhanced service providers to pay access charges.

Q: What is the next step in the process?

A: The Commission will review the comments filed in response to the NPRM and NOI. The FCC has expressed its intention to issue a Report and Order on reforming the interstate access charge system by May 1997. As for the NOI on Internet and interstate information services, the record does not close until late April. Based on that record, the Commission will decide whether at a later date to issue an NPRM seeking comment on specific proposals. The Commission also held a public forum on Access and Bandwidth on January 23, 1997, in order to more fully address questions relating to the implications of Internet services for the telephone network. The transcript of the forum and related materials are available on the FCC Web site at http://www.fcc.gov/bandwidth/.

Last Updated 2/14/97

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Dewayne Hendricks, WA8DZP ! AOL: HENDRICKS
Warp Speed Imagineering   ! Internet: dewayne@warpspeed.com
Fremont, CA 94539-3204   ! WWW: <http://www.warpspeed.com/>
~~~~~~

4. Reply Comments on Access Charges Reform NPRM now available

From: Greg Jones <wd5ivd@tapr.org>
Date: Wed, 19 Feb 1997 14:41:03 -0600
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v0300781eaf3115ba15ba@[192.168.1.2]>
Rendered body type: text/plain

Reply comments on the FCC's Access Charges Reform NPRM 96-488 are
now available online at:

        <http://www.fcc.gov/Bureaus/Common_Carrier/Comments/access_reform/replycomments
.html>

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Dewayne Hendricks, WA8DZP ! AOL: HENDRICKS
Warp Speed Imagineering   ! Internet: dewayne@warpspeed.com
Fremont, CA 94539-3204   ! WWW: <http://www.warpspeed.com/>
~~~~~~

5. GPS-20 Group Purchase Update

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Wed, 19 Feb 1997 15:08:30 -0600
To: "TAPR APRS SIG"<aprssig@tapr.org>,
        "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03007823af31194fed8d@[192.168.1.2]>
Rendered body type: text/plain

TAPR still needs another 15 units purchased to get to the magic order point.

If you think you will be wanting a MIC-E or TAC-2 kit in the next few months when they are available, then get that GPS-20 now to interface internally with the kit. We figure it might be summer before another group purchase is completed for those who might want one for their MIC-E or TAC-2 kits.

check http://www.tapr.org/gps for the full details on the GPS-20 purchase.

Latest info on the MIC-E is at http://www.tapr.org/tapr/html/mic-e.html

Latest info on the TAC-2 is at http://www.tapr.org/tapr/html/tac2.html

Cheers - Greg

6. TAPR GPS-20 Group Purchase

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Fri, 21 Feb 1997 13:57:34 -0600
To: "APRS SIG list   mailing"<aprssig@tapr.org>,

"TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v03007807af33ae228ec1@[208.134.134.40]>
Rendered body type: text/plain

The required number of orders has now been placed for the GPS-20 purchase.

The group purchase will be placed with Garmin sometime next week after all
the charges to account have been made and the money is available for
withdraw.

I'll post a followup when we have a delivery date from Garmin.

Cheers - Greg

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
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7. PC DSP Software Group Purchase

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Fri, 21 Feb 1997 13:59:13 -0600
To: " TAPR/AMSAT DSP "<dsp@tapr.org>, " DSP-93 Build "<dsp-93@tapr.org>,
"HF SIG list mailing"<hfsig@tapr.org>,
"TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v03007808af33aeafafe6@[208.134.134.40]>
Rendered body type: text/plain

This is to let those who were in the PC DSP Software Group purchase know
that the software has arrived and is being shipped.

Cheers - Greg

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
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8. [TAPR-BB:311] [FCCREG:572] FCC R/O 2330 MHz (fwd)

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 25 Feb 1997 18:52:28 -0600 (CST)
To: tapr-bb@tapr.org (TAPR-BB mailing)
Message-ID: <199702260052.SAA15593@tapr.org>
Rendered body type: text/plain

Sender: wd5ivd@tapr.org
Subject: [FCCREG:572] FCC R/O 2330 MHz

Date: Tue, 25 Feb 1997 17:02:31 -0600 (CST)
From: Brad Wyatt <bwyatt@arasmith.com>
Subject: [TAPR FCCREG:572] FCC R/O for Pacific Division 2330 MHz Alert Team
X-Comment: Tucson Amateur Packet Radio FCC Reg Discussions

Latest news as of 2PM PST, Feb. 25, 1997, on the 2305-2310 Mhz.
reallocation and auction NPRM --

To those of you on the Pacific Division 2300 MHz Alert List --- This
bulletin and the rest of the information should also be found on the
ARRL Pacific Division Home Page on WWW at pdarrl.org ---

As you all remember, Congress authorized the auction of 2305-2310 MHz of
the Amateur Band at the close of Congress in Oct. 1996. The FCC issued
an NPRM in this matter in November 1996 -- Comments due Dec. 4, 1996;
and Reply Comments due on Dec. 16, 1996.

The FCC issued a Report and Order on Feb. 19, 1997, on this matter.
The FCC created the Wireless Communications Service (WCS) and a new Part
27 to the FCC rules. They also changed Part 97 as indicated below. As
you can see they didn't take 2305-2310 MHz away from the ARS as had been
feared. Also, note the references to Amateur Radio use of 2390 - 2450
MHz.

Please also note that this Report and Order does NOT include any action
on the ARRL petition submitted to elevate our status to primary in
2300-2305 Mhz. That petition is still pending.

The Report and Order is very long and complex, dealing with WCS, but the relevant parts dealing with Part 97 follow:

36. Finally, in the NPRM, we proposed to permit amateurs to continue to use the 2305- 2310 MHz band on a secondary basis. We also proposed to permit continued flight test and vehicle launch use of the 2310-2320 and 2345-2360 MHz bands on a secondary basis. We are adopting these proposals. The effect of this action is that amateurs and aeronautical telemetry operations will be able to continue to use these bands so long as these operations do not interfere with WCS service. In addition, we update and clarify the frequency sharing requirements for [74] amateur use of the 2300-2310 MHz and adjacent bands [75]. We also clarify that footnotes US276 and US339 permit the use of various frequencies for telemetering and associated telecommand operations of launch vehicles "on a co-equal basis by Government and non-Government stations." With respect to Primosphere's request that all flight test operations be precluded from [76] the WCS bands, we find no basis for precluding such operations on a secondary basis. We make clear that if secondary flight test operations cause harmful interference to WCS operations, they must immediately either correct the problem or cease operations. If such operations prove to be a problem, however, we may re-evaluate this issue in the future.

[75] Specifically, we update 47 C.F.R. 97.303(j)(1) in order to inform the amateur community that amateur stations may not cause harmful interference to, nor are they protected from interference due to the operation of, mobile stations authorized in Region 1 (this is in addition to fixed operations). We also revise 47 C.F.R. 97.303(j)(2) in order to better alert amateurs of their spectrum sharing responsibilities.

PART 97 -- AMATEUR RADIO SERVICE

1. The authority citation for part 97 continues to read as follows:

AUTHORITY: 48 Stat. 1066, 1082, as amended; 47 U.S.C. sections 154, 303. Interpret or apply 48 Stat. 1064-1068, 1081-1105, as amended; 47 U.S.C. sections 151-155, 301-609, unless otherwise noted.

2. Section 97.303(j) is revised to read as follows:

97.303 Frequency sharing requirements.

* * * * *

(j) In the 13 cm band:

(1) The amateur service is allocated on a secondary basis in all ITU Regions. In ITU Region 1, no amateur station shall cause harmful interference to, and shall be not protected from interference due to the operation of, stations authorized by other nations in the fixed and mobile services. In ITU Regions 2 and 3, no amateur station shall cause harmful interference to, and shall not be protected from interference due to the operation of, stations authorized by other nations in the fixed, mobile and radiolocation services.

(2) In the United States:

(i) The 2300-2305 MHz segment is allocated to the amateur service on a secondary basis. (Currently the 2300-2305 MHz segment is not allocated to any service on a primary basis.)

(ii) The 2305-2310 MHz segment is allocated to the amateur service on a secondary basis to the fixed, mobile, and radiolocation services.

(iii) The 2390-2400 MHz segment is allocated to the amateur service on a primary basis.

(iv) The 2400-2402 MHz segment is allocated to the amateur service on a secondary basis. (Currently the 2400-2402 MHz segment is not allocated to any service on a primary basis.) The 2402-2417 MHz segment is allocated to the amateur service on a primary basis.

The 2417-2450 MHz segment is allocated to the amateur service on a

co-secondary basis with the Government radiolocation service. Amateur
stations operating within the 2400-2450 MHz segment must accept harmful
interference that may be caused by the proper operation of industrial,
scientific, and medical devices operating within the band.

This material is courtesy of Dewayne Hendricks, WA8DZP, Pacific Division
Assistant Director and TAPR Regulatory Chairman.

More details will be sent to the Pacific Division 2300 MHz Alert Team
and posted on the Pacific Division Home Page as soon as they are known.

Contact Brad Wyatt, K6WR, Pacific Division Director at k6wr@arrl.org or
(408) 395-2501 if you can help in any way.

73, Brad Wyatt K6WR ARRL Pacific Division Director

March 1997

Original source file: tapr-bb.9703
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1997-03/TAPR-BB_1997-03.txt

1. FCC Releases WT Docket 97-12

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Wed, 5 Mar 1997 14:38:07 -0600
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>,
        " Spread Spectrum "<ss@tapr.org>
Message-ID: <v03007803af438913fdb7@[208.134.134.40]>
Rendered body type: text/plain
```

http://www.tapr.org/ss
and
ftp://ftp.tapr.org/tapr/ss

now contains a pdf version of FCC WT Docket No. 97-12.

WT Docket No. 97-12 Notice of Proposed Rule Making regarding Amendment of the Amateur Service Rules to Provide For Greater Use of Spread Spectrum Communications Technologies was released March 3rd, 1997.

3/5/97

2. ARLB012 FCC proposes changes in spread spectrum regs

```
From: wd5ivd@tapr.org
Date: Wed, 5 Mar 1997 15:02:58 -0600
To: " Spread Spectrum "<ss@tapr.org>,
        "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03007804af438fd694bd@[208.134.134.40]>
Rendered body type: text/plain
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SB QST @ ARL $ARLB012
ARLB012 FCC proposes changes in spread spectrum regs

ZCZC AG12
QST de W1AW
ARRL Bulletin 12 ARLB012
>From ARRL Headquarters
Newington CT March 5, 1997
To all radio amateurs

SB QST ARL ARLB012
ARLB012 FCC proposes changes in spread spectrum regs

Responding to a petition for rulemaking from the ARRL, the FCC has proposed in WT Docket 97-12 to adopt changes in its Amateur Service rules governing spread spectrum. In spread spectrum the energy of the transmitted signal is distributed among several synchronized frequencies within a band and reassembled at the receiving end. This reduces power density and duration of a transmission on a particular frequency and lets spread spectrum almost invisibly share the same spectrum with users of other, narrowband modes. Spread spectrum also provides for improved communication under poor signal-to-noise conditions and in selective fading and multipath environments, and the ability to accommodate more communication channels operating simultaneously in the same spectrum.

The League's December 1995 petition asked the FCC to relax its rules to give Amateur Radio more opportunities to contribute to the development of spread spectrum techniques. Specifically, the League sought to have the FCC relax restrictions on spreading sequences and asked for greater flexibility in spreading modulation. In response, the FCC now has proposed to drop rules restricting amateur stations to transmitting only frequency-hopping and direct-sequencing spreading techniques. As requested by the League, the FCC also has proposed to require automatic power control for spread spectrum transmitters, to ensure use of the minimum power level needed to carry out communication.

The FCC also went along with the League's request to permit brief test transmissions using spread spectrum and to allow international spread spectrum communications between amateurs in the US and those in countries that allow hams to use spread spectrum. The current rules allow only domestic communication.

The use of spread spectrum techniques was first approved for Amateur
Radio in 1985 for bands above 225 MHz and at power levels up to 100
watts, and there has been some experimental amateur operation since
then. The FCC also has authorized Special Temporary Authority (STA)
in some instances to allow broader SS experimentation. Since spread
spectrum was introduced in the Amateur Radio service, commercial
spread spectrum applications have been developed, including personal
communication services, remote meter reading and position locating.
But, the League had argued that rules limitations held back further
spread spectrum experimentation. No changes are proposed in the
frequency bands where spread spectrum is permitted.

The FCC said the rule amendments would ''increase spectrum efficiency
and allow amateur operators to contribute to technological
advances.'' Comments on the NPRM in WT Docket 97-12 are due May 5,
with reply comments due June 5.
NNNN
/EX

3. Don't forget to vote for the TAPR Board!

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Fri, 14 Mar 1997 01:38:32 -0600
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v0300788eaf4eaf1e0a35@[208.134.134.40]>
Rendered body type: text/plain

TAPR Board of Directors Elections

The following four members have agreed to run for the three available
positions on the board of directors. You may vote for these individuals
and/or any write-in candidates using the ballot printed in the PSR or using
the on-line election web page (details below).

Deadline for balloting is March 30th, 1997. If you have not received a
ballot by February 1st, call the office and request a ballot be sent.
Board members elected will serve a three year term.

The following TAPR members have been nominated for election this year to
the TAPR Board of Directors.

Greg Jones, WD5IVD, wd5ivd@tapr.org

John Koster, W9DDD, w9ddd@tapr.org

Mel Whitten, K0PFX, k0fpx@tapr.org

Steve Stroh, N8GNJ, n8gnj@tapr.org

This year, members of TAPR can vote either by mail in ballot or over the
Internet using the world wide web. Check your PSR (now being received by
many) on how to submit your vote via the web.

Don't lose your PSR, because you will need information contained on your
mail label. If you have problems using the web system, contact Dorothy at
the office and we can look into the issue.

We look forward to your comments on this new way of collecting votes in
both traditional paper and newer electronic form.

**** DEADLINE March 30th! ****

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
-----

4. GPS-20 Purchase Update

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 18 Mar 1997 22:16:49 -0600
To: "APRS SIG list   mailing"<aprssig@tapr.org>,
        "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03020710af55187b3130@[208.134.134.40]>

Rendered body type: text/plain

The TAPR office expects to have the units from Garmin in shortly and as
soon as they arrive the GPS-20XLS units will be shipped out.

TAPR has a few units not spoken for, so call the TAPR office 817-383-0000
and talk to Dorothy to find out the story.

http://www.tapr.org/gps for details.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
---
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: <http://www.tapr.org/>
---

5. Steve Bible, N7HPR, on Ham Radio and More

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 20 Mar 1997 10:00:50 -0600
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>,
        " Spread Spectrum "<ss@tapr.org>, " TAPR Board "<tapr-board@tapr.org>
Message-ID: <v0302073caf570daf17ae@[208.134.134.40]>
Rendered body type: text/plain

TAPR's very own Steve Bible, N7HPR, will be a guest on Len Winkler's Ham
Radio & More Show Sunday March 30th at 2300 UTC. The topic will be the New
SPREAD SPECTRUM Plan.

Ham Radio & More Show information:

     http://www.goodnet.com/~lenwink/hrm.htm

To listen to past Ham Radio & More Shows via Real Audio (Sponsored by TAPR):

     http://www.tapr.org/hrm

The Ham Radio & More Show airs LIVE each Sunday at 6:00pm ET, (2300 utc), on:

- many local commercial stations throughout the country,
  (See http://www.goodnet.com/~lenwink/affil~1.htm for listing)

- WWCR Shortwave, 5.070 MHz, and

- RealAudio at: http://www.AudioNet.com/radio/business/kbnp
  (Thanks KBNP)

Also available tape delayed via WWCR Shortwave on Mondays, at 1000 utc on
3.210 MHz, and Sundays at 0600 utc on 5.070 MHz.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
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e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: <http://www.tapr.org/>
---

6. 1997 ARRL/TAPR DCC Announcement

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 20 Mar 1997 13:50:54 -0600
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03020758af57456f34f6@[208.134.134.40]>
Rendered body type: text/plain

Press Release. Please distribute as widely as possible.
http://www.tapr.org/dcc
March 15th, 1997

1997 ARRL and TAPR Digital Communications Conference
October 10-12, 1997
Baltimore, Maryland (minutes from BWI airport)

Web: http://www.tapr.org/dcc

It's that time again! Time to make your calendar and thinking about what to publish for the upcoming 16th Annual ARRL and TAPR Digital Communications Conference. 1997 marks the second year in which the ARRL Digital Communications Conference and TAPR Annual General Meeting have joined into one conference!

The ARRL and TAPR Digital Communications Conference is an international forum for radio amateurs in digital communications, networking, and related technologies to meet, publish their work, and present new ideas and techniques for discussion. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. The Digital Communications Conference is not just for the digital expert, but for digitally-orientated amateurs of all levels of experience.

The 1997 ARRL and TAPR Digital Communications Conference will be held October 10-12, 1997 in Baltimore, Maryland. This year's conference location is just minutes away from the BWI (Baltimore/Washington International) Airport.

Not only is the Digital Communications Conference technically stimulating, it is a weekend of fun for all who have more than a casual interest in any of the ham digital communications modes. This includes APRS operators, networkers, DX-Cluster Sysops, software writers, modem designers, and digital satellite communications enthusiasts. The ARRL and TAPR Digital Communications Conference is for all levels of digital operators -- a must conference to attend to get active on a national level. Now, more than ever, amateur radio needs this great meeting of the minds, since it is important that we demonstrate a continued need for the frequency allocations we now have by pushing forward and documenting our achievements. The ARRL and TAPR Digital Communications Conference is one of the few ways to record our accomplishments and challenge each other to do more.

A Conference for the Beginner as well

The conference is not just for the digital expert. This year's conference will again provide an entire session strand with beginning, intermediate, and advanced presentations on selected topics in digital communications. Some of the topics will include: APRS, Satellite Communications, TCP/IP, Digital Radio, Spread Spectrum and other introductory topics. Come to the conference and hear these topics presented by the experts! Don't miss this opportunity to listen and talk to others in this area.

Symposiums and Seminars

In addition to the presentation of papers on Saturday, three symposiums/seminars will be held before and after the conference. These sessions are provided to allow those with additional time and interest to make the most of the Digital Communications Conference. For those that might have interest in just a symposium or seminar, registration for the conference is not necessary to register and attend one or more of the symposiums and seminars. This allows maximum flexibility for those that might want to participate during the Digital Communications Conference, but do not have an entire weekend to devote to the event.

A full day symposium on Friday covering APRS will be conducted by Bob Bruninga, WB4APR (father of APRS) , Keith Sproul, WU2Z, Mark Sproul, KB2ICI (developers of Mac and Windows APRS), Steve Dimse, K4HG (developer of javAPRS), and other nationally known APRS leaders. Join this group for the afternoon and evening for in depth discussions and presentations on the current and future status of APRS. This is a unique opportunity to gain insight into this fast growing digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning System).

Starting late Friday afternoon a half-day seminar entitled "RF Basics for Computer Weenies: Helping the RF-challenged get the most out of the new high-speed wireless toys". The seminar will focus on such topic as basic antenna types and their characteristics, comparison of feedlines and connector types, propagation basics (calculation of path loss, multipath effects, fresnel zones, etc), weatherproofing, lightning protection,

filters, basic RF measurements, and other issues related to maintaining radio equipment on the UHF/SHF bands. This seminar will be starting late enough in the afternoon on Friday to allow those flying on that day to attend the seminar.

On Sunday morning, Dewayne Hendricks, WA8DZP, Phil Karn, KA9Q, and Tom McDermott, N5EG, will conduct a seminar focusing on "Spread Spectrum system design and theory." All three presenters are well known for their work in various areas of amateur digital communications and this 5 hour seminar should be an excellent opportunity to learn about the design and theory of spread spectrum systems. This seminar is a follow up to the past two seminars of PCS technology by Dewayne with a new focus on system design.

2nd Annual ARRL and TAPR DCC Student Papers Award

ARRL and TAPR especially welcome papers from full time students to compete for the second annual student papers award. Two $500 travel awards may be given, one in each of the following categories: a) best technical/theory-oriented paper by a student, and b) best educational or community-oriented application paper by a student. The paper should relate directly to a wireless digital communication topic (see guidelines for more information). Papers coauthored by educators or telecommunications professionals are also eligible for this award, as long as a student is the first author. Deadline for receipt of finished student paper manuscript: June 20th, 1997. Please note that this deadline is different than the general conference submission date. For full details and paper guidelines contact TAPR or check http://www.tapr.org/dcc.

Call for Conference Proceeding Papers

Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the Conference is not required for publication. If you know of someone who is doing great things with digital communications, be sure to personally tell them about this! Papers are due by August 20th, 1997, and should be submitted to Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111 or via the Internet to lweinberg@arrl.org. Information on paper submission guidelines are available on-line (http://www.tapr.org/dcc).

Local Co-Host

The 1997 ARRL and TAPR Digital Communications Conference will be co-hosted by AMRAD (Amateur Radio Research and Development Corporation).

The Amateur Radio Research and Development Corporation (AMRAD) is a worldwide club of amateur radio and computer experimenters whose purpose is to develop skills and knowledge in radio and electronic technology, advocate design of experimental equipment and techniques, promote basic and applied research, organize technical forums and symposiums, collect and disseminate technical information, and provide experimental repeaters. http://www.amrad.org

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What can you expect during the 1997 ARRL and TAPR Digital Communications Conference ?

* A full day of papers, breakout sessions, and selected topics on Saturday for the beginner to the advanced amateur digital enthusiast.

* Three seminars/symposiums
   Friday (1pm) - APRS, Conducted by:
                  Bob Bruninga, WB4APR
                  Keith Sproul, WU2Z
                  Mark Sproul, KB2ICI
                  Steve Dimse, K4HG

   Friday 3pm - RF Basics for Computer Weenies

   Sunday (8:30am) - Spread Spectrum System Design and Theory,
                  Conducted by:
                    Dewayne Hendricks, WA8DZP

Phil Karn, KA9Q
Tom McDermott, N5EG

* The second annual Student paper awards.

* TAPR Membership Meeting

* A banquet with Special Guest Speaker (TBA)

* SIGs (Special Interest Groups) on Saturday following the banquet.

* Informal get-togethers throughout the weekend.

* A meeting facility that is perfect for this type of meeting.

* Informal engineering discussions/demonstration areas.

* An event at which the most important new developments in amateur digital communications are announced.

* Digital 'movers and shakers' from all over the world in attendance.

Conclusion

If you have attended a Digital Communications Conference in the past, just remember back to how much fun it was discussing the latest developments into the wee hours! If you have never been, then make your plans now to attend and find out how much fun the Digital Communications Conference can be.

There are few activities where your participation can be so much fun, and so important! Getting together with colleagues from all over the world and bringing each other up to date on your latest work. All this, and more, for an unforgettable weekend of ham radio and digital communications. Make your travel and lodging arrangements now. We hope to see you at the ARRL and TAPR Digital Communications Conference October 10-12!

Full information on the conference and hotel information can be obtained by contacting Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road #337, Tucson, AZ 85749-9399. Phone: (817) 383-0000. Fax: (817) 566-2544. Internet: tapr@tapr.org Web: www.tapr.org/dcc

Sincerely,
Steve Ford, WB8IMY, ARRL Conference Co-Chair
Greg Jones, WD5IVD, TAPR Conference Co-Chair
Paul Rinaldo, W4RI, Local Host Liaison
Steve Stroh, N8GNJ, Asst Conference Manager

Note: If you need handouts or flyers for meetings, contact TAPR about getting what you need!

Hotel Information

Conference presentations, meetings, and seminars will be held at the Holiday Inn BWI Airport. DCC special rooms rate is $89 per night. When making reservations with the hotel, be sure to indicate you are attending the ARRL and TAPR DCC to get the discount. It is highly recommended that you book your room prior to arriving - a block of 75 rooms is reserved until September 9th, 1997. After the 75 rooms are booked, rooms will only be available in nearby hotels. Be sure to book your rooms early! The hotel provides transportation to and from BWI Airport, nearby Amtrak/MARC rail station, and the local Baltimore Light Rail. Please contact the hotel to arrange specific transportation needs.

Holiday Inn BWI Airport (conference hotel)
890 Elkridge Landing Rd, Linthicum, MD, 21090
(410) 859-8400, Fax (410) 684-6778

Registration

Contact the TAPR office by Phone, Fax, or e-mail (Internet: tapr@tapr.org) to preregister or for additional meeting information. MasterCard and VISA accepted.

- Preregistration (before Sept 10th) $42.00 *

- Late Registration or at door $47.00 *

          * - Conference Registration includes:
               Conference Proceedings, Saturday Sessions/Meetings, and Lunch.

- Saturday Evening Dinner (Limited Space) $20.00 **

           ** - Dinner, Speaker: TBA, Prize Drawing

Seminar/Symposiums

Note: You do not have to be registered for the conference to attend one or
more of the seminars/symposiums.

Friday, 1pm - 8pm.
APRS Symposium (full day)
Conducted by:
                      Bob Bruninga, WB4APR
                      Keith Sproul, WU2Z
                      Mark Sproul, KB2ICI
                      Steve Dimse, K4HG - Symposium Coordinator

- Registration $25.00 ***

Friday 3pm - 7pm.
RF Basics for Computer Weenies (half-day seminar)
Conducted by (TBA)

- Registration $20.00 ***

Sunday 8:30am - 1:30pm
Spread Spectrum System Design and Theory
Conducted by:
                       Dewayne Hendricks, WA8DZP
                       Phil Karn, KA9Q
                       Tom McDermott, N5EG

- Registration $20.00 ***

          *** Cost of seminar or symposium includes the cost of handout
materials.

Contact TAPR to register for the DCC.
Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road #337, Tucson, AZ
85749-9399. Phone: (817) 383-0000. Fax: (817) 566-2544.
Internet: tapr@tapr.org   http://www.tapr.org

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
-----

7. CQ VHF Magazine Request

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Fri, 21 Mar 1997 12:21:52 -0600
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03007807af5881db7f20@[208.134.134.40]>
Rendered body type: text/plain

Are you doing something unique in the digital world? Something you've built
or designed or done on the air? Something "cutting edge"? Digital voice or
video? If so, CQ VHF magazine wants to make you famous! CQ VHF editor Rich
Moseson, W2VU, says the magazine is always interested in feature articles
about digital communications and all other VHF/UHF activities. If you've got
something to share with a group of readers who span the spectrum from
newly-licensed amateurs to old-time hams with more than 25 years' experience,

Rich would like to hear from you. You may download CQ VHF's writers' guidelines from the magazine's World Wide Web site at "http://members.aol.com/cqvhf/" or contact W2VU via e-mail at "CQVHF@aol.com". If you don't have e-mail or web access, you may write to CQ VHF, 76 North Broadway, Hicksville, NY 11801 USA.

Posted to the TAPR-BB list on request by CQ VHF Magazine.

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8. [FCCREG:587] More on the 5.8 GHz U-NII band matters

From: wd5ivd@tapr.org
Date: Fri, 21 Mar 1997 12:55:31 -0600
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>,
" Spread Spectrum "<ss@tapr.org>
Message-ID: <v0300780aaf5889cf5dae@[208.134.134.40]>
Rendered body type: text/plain

Latest news as of 8AM PST, Mar. 21, 1997, on the 5725-5875 Mhz. potential reallocation and related matters --

To those of you on the Pacific Division 5725 - 5875 MHz Alert List ---

As you will recall, in January 1997, the FCC issued a Report and Order on Docket 96-102 dealing with the 5.8 GHz Amateur Band and adjacent spectrum. At that time, I sent you a six part message with the details of the Report and Order from the FCC.

Early in March, 1997, three Petitions for Reconsideration on Docket 96-102 were submitted to the FCC. The following is a brief description of the contents of the three petitions obtained from an article in the trade press:

Manufacturers Ask for Changes in Unlicensed 'NII' Device Rules

In petitions for reconsideration filed last week, Apple Computer, Inc., Hewlett-Packard Co., and the Wireless Information Networks Forum, Inc. (WINForum) urged the FCC to modify its recent order in Engineering and Technology docket 96-102 to allow more highly directional antennas and greater power levels for certain unlicensed devices. In its order, the Commission had designated 300 megahertz of spectrum in the 5 gigahertz band for unlicensed NII (national information infrastructure) devices to be used for low-power data communications.

The FCC had divided the U-NII band into three segments: indoor communications, medium-range communications, and somewhat longer-range 'community networks' that would allow wireless connections to Internet service providers. The FCC has not yet authorized any U-NII equipment for sale to the public.

In its petition for reconsideration, Apple asked the Commission to consider permitting the use of more highly directional antennas for U-NII devices. The agency could take up that request when it considers a similar issue for unlicensed spread-spectrum devices in another proceeding (engineering and Technology docket 96-8), Apple suggested.

The "core question of whether the use of more highly directional antennas will increase, or instead reduce, objectionable interference to others sharing the 5725-5850 MHz band can best be addressed if all relevant attributes of both spread-spectrum and U-NII devices are 'on the table' at the same time," it said.

The Commission also should allow the use of directional antennas for the medium-range U-NII band, Apple argued. While the 1-watt power limit for that segment is "adequate to permit the creation of longer-reach community networks," the U-NII rules allow only lower-range omnidirectional antennas in the middle segment. Such a restriction will "frustrate the ability of manufacturers and users seeking to create community networks," Apple said.

It urged the FCC to increase the permissible power density in the upper and middle U-NII segments to permit U-NII links to support data rates at the T-1 level, and even faster, over distances exceeding the "several kilometers" allowed by the Commission's rules.

Hewlett-Packard asked the FCC to raise the permitted power level in the

lowest U-NII segment from 200 milliwatts to 1 watt. This would "promote international harmonization" of technical standards for unlicensed 5 GHz devices, permit manufacturers to design products suitable for both U.S. and European markets, and "make possible the development of more robust and longer-range U-NII devices" in this segment, Hewlett-Packard said.

WINForum, a trade association representing manufacturers of unlicensed devices, commended the FCC for making U-NII products available for "multimedia systems." But it said that in a few respects, the technical regulations adopted by the Commission "may unnecessarily restrict design flexibility and ... impair the capabilities of these devices." WINForum asked the FCC (1) to permit the operation of U-NII devices across boundaries between the lower and middle-band segments, (2) to delete frequency-stability requirements, (3) to clarify U-NII signal-measurement techniques, and (4) to make a variety of other technical rule changes and clarifications.

To date, I have only been able to obtain the complete text of the Apple Petition for Reconsideration:

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Commission's Rules to	)	ET Docket No. 96-102
Provide for Operation of Unlicensed NII	)	RM-8648
Devices in the 5 GHz Frequency Range	)	RM-8653

PETITION FOR RECONSIDERATION

Apple Computer, Inc. ("Apple") hereby respectfully requests that the Federal Communications Commission ("Commission" or "FCC") reconsider in three respects its recent Report and Order in the above-referenced proceeding.[1]

First, Apple requests that the Commission expedite its consideration of whether to permit the use of more highly directional antennas for transmitters using the uppermost portion (5725-5825 MHz) of the Unlicensed National Information Infrastructure ("U-NII") band.[2]

Second, Apple requests that the Commission amend the antenna directionality rules for the middle U-NII sub-band (5250-5350 MHz).

Finally, Apple requests that the Commission amend the peak power spectral density ("PSD") limit for U-NII devices operating in the 5250-5350 MHz sub-band to 125mW/MHz and amend the PSD limit for U-NII devices operating in the 5725-5825 MHz sub-band to 1 Watt in 2 MHz, rather than 1 Watt in 20 MHz.[3]

i. the commission should expedite its consideration of whether to permit u-nii devices operating in the 5725-5825 mhz band to use more highly directional transmit antennas.

Apple is one of the original proponents of unlicensed U-NII devices.[4] In addition to supporting generally the need for a high bandwidth unlicensed band in the 5 GHz range, Apple has been one of the principal advocates for the creation of unlicensed longer-distance "community networks." As such, Apple was pleased that the Commission has come to recognize the importance of community networks in helping to meet the communications needs of educational institutions, libraries, health care providers, and others,[5] and that the Report and Order therefore adopted power limits and other rules that will make possible at least a limited community networking function in a portion of the U-NII band.[6]

In the Report and Order, the Commission recognized that it may be appropriate to further accommodate community networking by permitting U-NII devices operating in the 5725-5825 MHz band to use more highly directional antennas than are permitted under the current rules.[7]

The power and antenna directionality rules adopted for U-NII devices operating in the 5725-5825 MHz band are identical to those that currently apply to spread spectrum Part 15 devices operating in the 5725-5850 MHz band.[8] In a separate proceeding, however, the Commission is considering whether to permit 5 GHz spread spectrum devices to use more highly directional transmit antennas.[9] As a result, the Commission stated in the Report and Order that, if it decides in the other proceeding to permit the use of higher gain directional transmitting antennas for spread spectrum operations, it may consider in a separate rulemaking similar action for U-NII devices operating in the 5725-5825 MHz band.

Apple urges the Commission to consider in tandem, rather than seriatim, whether to increase the permitted antenna gain for both spread spectrum and U-NII systems operating in the 5725-5825 MHz band. Were the Commission to proceed as discussed in the Report and Order _ first deciding whether to increase antenna gain for spread spectrum systems, and only then deciding whether to increase antenna gain for U-NII systems _ its process would delay unnecessarily the potential introduction of beneficial longer range U-NII devices.

There are compelling policy reasons why the Commission should consider simultaneously the permissible antenna gain for spread spectrum and 5725-5825 MHz U-NII devices. Indeed, Apple first noted the interplay between the spread spectrum and U-NII proceedings seven months ago when it filed comments in ET Docket No. 96-9.

First, the core question of whether the use of more highly directional antennas will increase _ or instead reduce _ objectionable interference to others sharing the 5725-5850 MHz band can best be addressed if all relevant attributes of both spread spectrum and U-NII devices are "on the table" at the same time. Second, several commenters in this proceeding _ including WINForum, Microsoft, and Motorola _ already have addressed why the Commission should adopt and maintain parallel rules for spread spectrum and U-NII devices operating in the 5725-5825 MHz band. Third, the record in this proceeding already contains an extensive discussion of the need for longer distance community networks, as well as of the potential for interference between U-NII systems that employ directional antennas and other users of the 5725-5825 MHz band.

As a result of the above, there is no need for the Commission to start a new proceeding or to defer, until after a decision has been issued in the spread spectrum proceeding, its consideration of whether to permit higher gain antennas for U-NII devices operating in the 5725-5825 MHz band. Either such approach would force parties to duplicate much of the record that already exists in this proceeding, thereby wasting the Commission's resources and those of the public, as well as effectively guarantee that the introduction of longer range U-NII devices would be delayed by a year or more.

II. the commission also promptly should consider whether to permit the use of more highly directional transmit antennas in the 5250-5350 MHz band.

The arguments supporting the use of directional transmit antennas are as applicable to the middle U-NII band (5250-5350 MHz) as they are to the upper U-NII band (5725-5825 MHz). The one watt power limit for the middle band, by itself, is adequate to permit the creation of longer-reach community networks. The current rules, however, penalize directionality beyond that of a 6 dBi (essentially omnidirectional) antenna and, as a result, will frustrate the ability of manufacturers and users seeking to create community networks within this sub-band.

As Apple and others previously have discussed in this proceeding, the Commission should encourage, rather than penalize, the use of more highly directional transmit antennas. To do so, the Commission should amend the antenna directionality rules for 5250-5350 MHz U-NII devices at the

same time that it amends the antenna directionality rules for 5725-5825 MHz U-NII devices and spread spectrum devices. Specifically, the Commission should replace its current rule (which requires a dB-for-dB back-off in transmit power for antennas with a directional gain of more than 6 dBi) with a rule requiring a back-off of 1 dB in power for each 3 dB of antenna gain in excess of 6 dBi. Alternately, the Commission could apply the same directionality rules to the middle U-NII band that it adopts for the upper U-NII band and for spread spectrum devices.

iii. the commission should amend the psd limits applicable to the middle and upper u-nii sub-bands by basing the psd limits on a 2 mhz rather than a 20 mhz bandwidth.

In the Report and Order, the Commission imposed peak PSD limits for each of the U-NII band segments. In the middle U-NII band, a limit of 12.5 mW/MHz for an antenna gain of 6 dBi was adopted; for the upper U-NII band, a limit of 50 mW/MHz for an antenna gain of 6 dBi was adopted.[10]

The Commission adopted its U-NII PSD rules in large part to encourage the use of the U-NII bands for the broadband operations for which they are intended.[11] While Apple recognizes the role the U-NII band will play in making available very high speed, short range communications, the rules governing the band should not be so strict that they make it impossible for U-NII devices also to satisfy the longer distance, somewhat lower bandwidth needs of those who will rely on community networks.

At this stage in the deployment of "wideband" services, an ISDN data rate (56 kbps) is a luxury for many, and a T1 (1.544 Mbps) unlicensed capability represents a major advance over the data rates that currently are available over wired networks only at very high monthly costs _ if at all _ to most individuals and organizations. Community networks must be able to provide T1 data rates over reasonable distances if they are to meet the immediate and near-term needs of many users, including rural schools, hospitals, and libraries. As a result, the Commission should amend its PSD rules so as to make it more feasible for U-NII links in the middle and upper portions of the U-NII band to support T1 and faster data rates over distances exceeding "several kilometers."[12]

Power density is, of course, a major determinant of the distances that can be achieved for line-of-sight paths. Under the spread spectrum rules, designers are free to respond to market forces, making tradeoffs between distance (as represented by the signal-to-noise ratio produced as a result of a PSD) and data rate (or bandwidth). Under the U-NII rules, these tradeoffs are not permitted: distance is essentially fixed, independent of bandwidth, because manufacturers must reduce their power (and hence achievable distance) in tandem with any reduction in bandwidth. This disparity not only violates the goal of functional and technological parity for U-NII devices vis-a-vis other unlicensed devices operating in the 5 GHz range.[13] In addition _ and even more importantly _ it will make it more difficult for U-NII devices to provide the bandwidths, T1 and up, at the distances that community networks will require.

Accordingly, the Commission should modify the PSD limit for U-NII devices operating in the 5725-5825 MHz band from 1 Watt in 20 MHz (50 mW/MHz) to 1 Watt in 2 MHz, or 500 mW/MHz. This change not only will ensure that U-NII devices are able to provide communications to those who are bypassed by other technologies, but also will create some degree of technological and distance-reaching parity between U-NII devices and spread spectrum devices at benchmark T1 data rates.

In addition, the Commission should modify the PSD limit for U-NII devices operating in the 5250-5350 MHz band from 0.250 Watts in 20 MHz (12.5 mW/MHz) to 0.250 Watts in 2 MHz, or 125 mW/MHz.

CONCLUSION

For the reasons stated herein, Apple respectfully requests that the FCC promptly consider whether to permit the use of more highly directional antennas by U-NII devices operating in the middle and upper U-NII sub-bands, and amend the peak PSD limits for U-NII devices operating in these sub-bands.

Respectfully submitted,

APPLE COMPUTER, INC.

/s/ James F. Lovette
James F. Lovette
Principal Scientist, Network Outreach
Apple Research Laboratories
Apple Computer, Inc.
One Infinite Loop, MS: 301-3E
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OF COUNSEL
Henry Goldberg
Mary J. Dent
Goldberg, Godles, Wiener & Wright
1229 Nineteenth Street, N.W.
Washington, D.C. 20036
(202) 429-4900

March 3, 1997

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[1] Amendment of the Commission's Rules to Provide for Operation of Unlicensed NII Devices in the 5 GHz Frequency Range, Report and Order, ET Docket No. 96-102, FCC 97-5 (released Jan. 9, 1997).

[2] On February 13, 1997, Apple submitted a letter to the Office of Engineering and Technology in which it urged the Commission not to defer its consideration of whether to permit the use of more highly directional antennas by U-NII transmitters using the 5725-5825 MHz band, but rather to consider this question as part of the instant proceeding and, at most, to request additional comment on the narrow question of whether the U-NII rules should be changed to reflect any changes in the spread spectrum rules. In order to avoid any claim that Apple's letter did not provide an adequate basis for the Commission to expedite its consideration of the use of highly directional transmit antennas by U-NII devices, and in the event that the Commission would prefer to address this issue as part of its reconsideration process rather than through a request for additional comments, Apple is including this request in its Petition for Reconsideration.

[3] The Report and Order permits U-NII devices operating in the upper band to employ a peak PSD of 50 mW/MHz for an antenna gain of 6 dBi. Report and Order at 49. This corresponds to a PSD of 1 Watt in 20 MHz for an antenna gain of 6 dBi.

[4] Id. at 2.

[5] Id. at 18.

[6] Id. at 46.

[7] Id. at 47.

[8] Id. at 46. While the power and directionality rules are the same for U-NII and spread spectrum systems, U-NII devices are subject to much stricter PSD limits than are spread spectrum systems operating under 47 C.F.R. 15.247. As discussed below, this limits the capabilities of U-NII devices vis-a-vis spread spectrum devices, and this disparity should be addressed by the Commission.

[9] Id. at 47 (citing ET Docket No. 96-8).

[10] Id. at 49.

[11] Id. U-NII devices are defined as providing "wideband, high data rate"
communications. 47 C.F.R. 15.403 (a).

[12] See id. at 46 (stating that the power limits adopted for U-NII devices operating in the upper band will provide community networks with a typical range of several kilometers, and that longer-range communications could be possible in rural and other areas with a low interference environment).

[13] Unlike U-NII devices, frequency hopping spread spectrum devices are subject to no limits on minimum bandwidth or maximum PSD; for example, a frequency hopping device that can convey T1-rate data in 1 MHz can utilize a PSD of 1 Watt/MHz (1000 mW/MHz), 13 dB greater than (or 20 times) the PSD limit for a U-NII device operating in the upper U-NII sub-band and 80 times the PSD limit for a U-NII device operating in the middle U-NII sub-band. Frequency hopping devices offering still lower data rates and bandwidths can utilize even higher PSDs. For example, to convey the rates achieved by new-generation telephone modems, 56 kbps, a frequency hopping systems could use an on-channel RF bandwidth of 100 kHz; and the PSD could then be 10 Watts/MHz. Direct sequence spread spectrum systems also have an advantage over U-NII systems in this regard: for example, a direct sequence system conveying a 2 MHz data channel with a processing gain of 10 dB can offer a signal-to-noise ratio (after de-spreading) equivalent to that provided by a signal utilizing a PSD of 500 mW/MHz, 10 dB greater than (or 10 times) the PSD limit for a U-NII device operating in the upper U-NII sub-band and 40 times the PSD limit for a U-NII device operating in the middle U-NII sub-band.

This information came from Dewayne Hendricks, WA8DZP, Pacific Division Assistant Director, member of ARRL Future Systems Committee, and Chairman of TAPR Regulatory Committee. Editing and conversion of the original WP document was done by Glen Lokke, KE6NBO and relayed to me. Many thanks to Dewayne and Glen for all their work!

I am continuing to try to develop machine readable versions of the other two Petitions for Reconsideration. I have been promised hard copy of all three documents from ARRL HQ. I plan to convert the hard copy of the WINForum and HP petitions to machine readable when they arrive and forward them to you.

At the moment I have no idea of what the FCC will do with these petitions, nor any time schedule. It is my understanding that the ARRL plans to comment on the Apple Petition. If you would like to participate in preparing input to the ARRL Comments, please send the information to me for forwarding to ARRL HQ. In addition, you may wish to comment to the FCC directly. Please copy me on any direct comments to the FCC.

I continue to hope that this bulletin, previous bulletins, the text of ET Docket 96-102 as well as all the other information will be up on the ARRL Pacific Division Home Page on WWW --- (address http://www.pdarrl.org/). That process is suffering some "growing pains", but I hope that we will work our way through them soon.

See also the ARRL Home Page at http://www.arrl.org/ and select "Band Threat News".

For those of you who wish to get the information concerning NII/SUPERNet Docket (ET Docket No. 96-102) directly from the FCC Web site ---

Here are the URL's:

Text version (without footnotes and special formatting):

<http://www.fcc.gov/Bureaus/Engineering_Technology/Notices/fcc96193.txt>

WordPerfect version (with footnotes and special formatting):

<http://www.fcc.gov/Bureaus/Engineering_Technology/Notices/fcc96193.wp>

More details will be sent to the Pacific Division 5725-5875 MHz Alert List and, hopefully, posted on the Pacific Division Home Page as soon as they are known.

Any thoughts on any of this by anyone would be appreciated!

Contact Brad Wyatt, K6WR, ARRL Pacific Division Director at k6wr@arrl.org or (408) 395-2501 if you can help in any way.

73, Brad Wyatt K6WR ARRL Pacific Division Director

9. News on sale of AEA Product Lines

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sat, 22 Mar 1997 19:12:54 -0600
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>,
        "NETSIG list   mailing"<netsig@tapr.org>,
        " AMSAT BB Mail Group "<amsat-bb@amsat.org>
Cc: " TAPR SYS "<tapr-sys@tapr.org>
Message-ID: <v03007802af5a2f56e807@[208.134.134.40]>
Rendered body type: text/plain

If you have not heard, it was reported on Newsline this weekend that AEA has sold its antenna product line (antennas, analyzers, and testers) to Tempo Research of Vista, California and that Mike Lamb, N7ML, will be taking a position within the new AEA division of Tempo Research.

Timewave of St Paul, Minn (http://www.timewave.com/) has purchased the AEA Data Products line and some other products.

Listen to: http://www.tapr.org/newsline #1023, time segment:13:25 for more details.

Timewave has a web page up already covering this (http://www.timewave.com/aea.html)

Here is what that pages says:

March 17, 1997

Timewave is in the final stages of completing the purchase of the data hardware and software product lines of AEA (Advanced Electronic Applications, Inc.). Timewave will offer new product sales as well as warranty service, repair, and firmware upgrades for existing AEA products. It will be several weeks before any of the new products and services begin to be available.

Check the Timewave Web page for further information - it will appear here first!

Please help us by not calling via telephone until we have had a chance to get the new product line and services organized.

Tempo Research Corp. of Vista, CA has acquired the AEA antenna analyzer and antenna product lines. Contact them at 619-599-9677.

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
-----

10. TAPR Board Election -- Don't forget to vote!

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 23 Mar 1997 14:05:32 -0600
To: "APRS SIG  list   mailing"<aprssig@tapr.org>,
        " DSP-93 Build "<dsp-93@tapr.org>,
        "HF SIG  list   mailing"<hfsig@tapr.org>,
        "NETSIG  list   mailing"<netsig@tapr.org>,
        "BBS SIG  list   mailing"<bbssig@tapr.org>,
        " TAPR/AMSAT DSP "<dsp@tapr.org>,
        "TAPR-BB  list   mailing"<tapr-bb@tapr.org>,
        TAPR Regional Freq <regional_freq@tapr.org>,
        " tapr-tnc "<tapr-tnc@tapr.org>, " Spread Spectrum "<ss@tapr.org>
Message-ID: <v03007814af5b3a76bea5@[208.134.134.40]>
Rendered body type: text/plain
```

TAPR Board of Directors Elections

If you are a member of TAPR, don't forget to take the time to vote!

We have four people running for three places, so it could be your vote that determines who is on the TAPR Board of Directors.

Deadline for balloting is March 30th, 1997.

This year, members of TAPR can vote either by mail in ballot or over the Internet using the world wide web. Check your PSR on how to submit your vote via the web.

Don't lose your PSR, because you will need information contained on your mail label. If you have problems using the web system, contact Dorothy at the office and we can look into the issue.

PSRs were mailed on March 5th, so all members should have them by now. If you have not received your PSR, call or send e-mail to the office and request a ballot be sent or request the necessary information to allow you to ballot using the on-line Web page.

**** DEADLINE March 30th! ****

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
---
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: <http://www.tapr.org/>
---

11. Steve Bible, N7HPR, on Ham Radio and More

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 27 Mar 1997 22:12:24 -0600
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Cc: " Spread Spectrum "<ss@tapr.org>
Message-ID: <v0300782faf60f5708361@[208.134.134.40]>
Rendered body type: text/plain
```

Just as a reminder....

TAPR's very own Steve Bible, N7HPR, will be a guest on Len Winkler's Ham Radio & More Show Sunday March 30th at 2300 UTC. The topic will be the New SPREAD SPECTRUM Plan.

Ham Radio & More Show information:

     http://www.goodnet.com/~lenwink/hrm.htm

To listen to past Ham Radio & More Shows via Real Audio (Sponsored by TAPR):

     http://www.tapr.org/hrm

The Ham Radio & More Show airs LIVE each Sunday at 6:00pm ET, (2300 utc), on:

- many local commercial stations throughout the country,
  (See http://www.goodnet.com/~lenwink/affil~1.htm for listing)

- WWCR Shortwave, 5.070 MHz, and

- RealAudio at: http://www.AudioNet.com/radio/business/kbnp

(Thanks KBNP)

Also available tape delayed via WWCR Shortwave on Mondays, at 1000 utc on
3.210 MHz, and Sundays at 0600 utc on 5.070 MHz.

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8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org web: <http://www.tapr.org/>

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
-----

12. Update on Latest TAPR GPS-20 Shippment

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 27 Mar 1997 22:18:33 -0600
To: "APRS SIG list mailing"<aprssig@tapr.org>,
"TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v03007830af60f5ba94ef@[208.134.134.40]>
Rendered body type: text/plain

The office has shipped over 90% of the GPS-20 that were spoken for. The
rest should be shipped by the weekend.

That leaves about 20+ units left at the office.

Full details on the purchase and unit can be found at: http://www.tapr.org/gps

Cheers - Greg

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org web: <http://www.tapr.org/>

---

13. Steve Bible's HRM Show on-line

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 30 Mar 1997 22:56:57 -0600
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>,
" Spread Spectrum "<ss@tapr.org>
Cc: " TAPR Board "<tapr-board@tapr.org>
Message-ID: <v03020705af64f0559c9b@[208.134.134.40]>
Rendered body type: text/plain

TAPR's very own Steve Bible, N7HPR, was a guest on Len Winkler's Ham Radio
& More Show Sunday March 30th at 2300 UTC. The topic was the New SPREAD
SPECTRUM Plan.

If you were not able to hear the show, it is now available on-line. To
listen to the show you can visit either:

http://www.tapr.org/ss

or

http://www.tapr.org/hrm

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8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org web: <http://www.tapr.org/>

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14. TAPR Dayton Activities '97

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 31 Mar 1997 13:28:25 -0600
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03007810af65c022c7c8@[208.134.134.40]>
Rendered body type: text/plain

TAPR Dayton Activities '97

Dayton Hamvention is May 16, 17, and 18, 1997

Full details, maps, and updates at:
      http://www.tapr.org/tapr/html/dayton.html

==========

TAPR Schedule

Friday
        12noon -- Exhibit Area Opens
        1:00pm -- TAPR Digital Forum Begins
        7:00pm -- PacketBASH
                (Dinner, Prizes, SIG meetings, Banquet Speaker Tom Clark,
W3IWI)

Saturday
        8am -- Exhibit Area Opens
        6pm -- Exhibit Area Closes

Sunday
        8am -- Exhibit Area Opens
        2pm -- Exhibit Area Closes

==========

1997 TAPR Digital Forum (Friday)

Digital Forum will be from 1pm till 5pm.

The TAPR digital forum should be a great forum this year.
If you have time at Dayton -- be sure to attend the meeting!

1:00 - 1:45pm (45 min)
   * Introduction to Spread Spectrum Communications
     Steve Bible, N7HPR

1:45 - 2:00pm (15min)
   * Update on TAPR
     Greg Jones, WD5IVD and Steve Stroh, N8GNJ

2:00pm - 2:40pm (40 min)
   * Building TCP/IP Networks in the Amateur Radio Community
     John Ackermann, AG9V, Allan Finne, KB5SQK

2:40pm - 3:00pm (20 min)
   * Review of current SS developments
     Barry McLarnon, VE3JF, Dewayne Hendricks, WA8DZP

3:00 - 3:20pm (20 min)
   * System Design Parameters for Spread Spectrum Systems
     Tom McDermott, N5EG

3:20 - 3:40pm (20 min)
   * TBA
     Phil Karn, KA9Q

3:40 - 4:00pm (20 min)
   * TAC-2 (Totally Accurate Clock) GPS Project
     Tom Clark, W3IWI

4:00 - 4:20pm (20 min)
   * Update on Amateur DSP Activity
     Bob Stricklin, N5BRG, Bill Reed, WD0ETZ

4:20 - 5:00pm+

```
   * APRS Update and TAPR APRS SIG Meeting
     Bob Bruninga, WB4APR and Keith Sproul, WU2Z

==========================================================================

1997 Packet Bash!

The 1997 "Packet BASH" co-sponsored by TAPR and the Miami Valley FM
Association, Dayton's packet radio club, will be held on Friday of the
Dayton Hamvention. The event will be held at the NCR "Sugarcamp" Conference
Center and will be catered. The dining room holds about 300 people! So the
more the merrier! Dinner space will be limited, so make your reservation
early for dinner, so that the correct number of dinners can be ordered in
advanced.

An event for the digitally-inclined ham, featuring:

   * Buffet dinner,
   * Nationally-known speaker Tom Clark, W3IWI,
   * TAPR special interest group meetings,
   * "Birds of a Feather" gatherings,
   * And lots of fun will cost $20 per person.

We hope that this will provide an opportunity for packet and digital radio
enthusiasts to have a great night out while at Hamvention.

The schedule of events for the Packet BASH is still tentative, but will look
something like this:

     1900 -- Doors Open (7pm)
     1930 -- Dinner (7:30pm)
     2030+ - Speaker (Tom Clark, W3IWI), raffle, and SIG meetings after
                dinner

Talk-in will be on 146.415 simplex.

For more information, send email to "packbash@ag9v.ampr.org" or stop by the
TAPR booth at Dayton for schedule and map.

* The cost is $20.00 per person, tax and tip included.

Banquet tickets can be ordered from the TAPR office. Reservations made
before May 1st will have their tickets mailed to them. After May 1st,
tickets purchased will be available for pickup at the TAPR booth. Walk-up to
the event will be accommodated as best as possible. There is limited space
(in the way of food ordered) for dinner. Amateurs who wish to hear the
speaker and discussion are asked to arrive around 2030 (8:30pm). All
amateurs are welcome to attend, enjoy the speaker, and participate in the
meetings, although only those purchasing a dinner can eat.


Maps and Directions can be found at http://www.tapr.org/tapr/html/dayton.html



--------------------------------------------------------------------------
Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
--------------------------------------------------------------------------
e-mail: TAPR@TAPR.ORG  ftp: ftp.tapr.org   web: <http://www.tapr.org/>
--------------------------------------------------------------------------
```

15. first annual Earth Day Special Event

```
From: dvandeke@bio2.edu  Mon Mar 31 21:20:23 1997
Date: Mon, 31 Mar 1997 21:20:10 -0600
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03020715af662f41eb46@[208.134.134.40]>
Rendered body type: text/plain

Forwarded message:
From:   dvandeke@bio2.edu (David P. van De Kerk, KE6GXD)
To:     billwa6itf@aol.com
Date: 97-03-31 14:40:25 EST

Come Join Us at Biosphere 2!


Biosphere 2 Center is pleased to announce the first annual Earth Day
Special Event, an Amateur Radio celebration honoring the Earth. On Sunday,
```

April 20th, amateur radio operators from Arizona, students of all ages, and the general public are invited to participate as we make contact with people from around Arizona and the world, wishing all a happy Earth Day. Biosphere 2 is a unique combination of the largest functioning Earth systems model in the world linked with leading-edge technology for data collection and analysis. Biosphere 2 is a set of tools, a model, and a system for viewing the world. Biosphere 2 and the surrounding Sonoran Desert ecosystem provide the gateway to exploring both local and global environmental issues, and an ideal setting to host the first ever amateur radio event concerned with those issues.

The Earth Day Special Event is being hosted on the lawn in front of the Human Habitat where the former Biospherians lived. This is also the only Free-Day of the year, so there is no charge to participate or tour the campus. Attendance for this event, which will also have key note speakers and educational activities concerning the environment, is expected to range from four to seven thousand people. Bring your family and friends. This is a unique exposure opportunity for the amateur radio world.

Educational activities are being coordinated by Terry Pemberton of the Math Science Technology Project of Prescott Unified School District. Terry has been using amateur radio as a teaching resource for years and is eager to share his methods and ideas with others. The educational curriculum, developed by the Math Science Technology Project, revolves around the topics of radio wave propagation, solar flares, light transmission, and sunspot cycles.

Bob O'Connell and Steve Arens, both with the Radio Society of Tucson, are coordinating the technical issues, including placement and quantity of equipment and frequency assignments. We encourage you to bring equipment and demonstrate your knowledge, but first contact either Bob or Steve.

Bryan Thorpe works at the Biosphere 2 Center and is acting as liaison for all parties. He is the contact point for all questions that cannot be answered by email.

This is an opportunity to share the value of amateur radio, to experience the Biosphere 2 and the beautiful Santa Catalina Mountain range, and to celebrate our Earth by communicating with both neighbors and distant friends.

If you have any questions/suggestions, or would like to participate as a guest or a demonstrator, then please contact us. Clubs and school organizations are encouraged to send a representative. Also, we are especially interested in solar powered displays, but power will be available.

We hope to see you!

Bryan Thorpe KE6TCF Earth Day Coordinator bthorpe@bio2.edu (800) 992-4603x1
Terry Pemberton KB7TRE Education Coordinator
Bob O'Connell KC5DWB Technical Coordinator reo@azstarnet.com

Frequency List

2 Meters	147.140	+600 FM Voice
6 Meters	50.130	Voice
10 Meters	28.405	Novice Voice !
15 Meters	21.138	Novice CW !
15 Meters	15.238	General Voice
20 Meters	14.245	Voice
40 Meters	7.117.5	Novice CW !
40 Meters	7.238	Voice

April 1997

Original source file: tapr-bb.9704
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1997-04/TAPR-BB_1997-04.txt

1. Update on past SIG Mail Archives

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 1 Apr 1997 11:31:39 -0600
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Cc: " TAPR SYS "<tapr-sys@tapr.org>
Message-ID: <v03007806af66f66a15e4@[208.134.134.40]>
Rendered body type: text/plain
```

http://www.tapr.org/tapr/html/taprmailsearch.html

now contains both a search engine for past SIG mail archives as well as an
HTML interface to via messages by index and thread.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: <http://www.tapr.org/>

---

2. Attending the 1997 Dayton Hamvention?

```
From: wd5ivd@tapr.org
Date: Sun, 6 Apr 1997 15:33:52 -0500
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v0302091baf6db904ad77@[208.134.134.40]>
Rendered body type: text/plain
```

Attending the 1997 Dayton Hamvention?
Then don't miss out on PACK*BASH!

What?
        An event for the digitally-inclined ham, featuring:
        * Buffet dinner
        * Keynote address by Tom Clark, W3IWI
        * TAPR special interest group meetings
        * "Birds of a Feather" gatherings

When?
        Friday evening, May 16, 1997
        Doors open at 7:00 pm; dinner served at 7:30 pm
        Speaker and meetings after dinner

Where?
        NCR "Sugarcamp" Conference Center, 101 W. Schantz Ave. --
        South of downtown Dayton, just west of Main St. (Rt 48).
        Maps available on the TAPR web site (www.tapr.org) or at the
        TAPR booth.

How?
        Dinner requires advance registration and payment through TAPR.
        Tickets will be available at the TAPR booth on Friday, though
        we strongly encourage registration <before> Hamvention. The cost
        is $20.00 per person, tax and tip included.

        All amateurs are welcome to attend, enjoy the speaker, and
        particpate in the meetings, although only those purchasing a dinner
        can eat.

        To register, contact:
        PACK*BASH
        c/o TAPR
        8987-309 E. Tanque Verde Road #337
        Tucson, AZ   85749-9399

        Phone: (817) 383-0000
        Fax: (817) 566-2544
        Internet: tapr@tapr.org

        Visa/Mastercard Accepted

Who?
        PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet Radio,
        the national leader in digital communication -- and the Miami
        Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to
http://www.tapr.org/tapr/html/dayton.html, or send email to tapr@tapr.org.
You can request information via packet radio at BASH@N8ACV.#DAY.OH.USA.NOAM.

3. TAPR offers the Motorola ONCORE VP GPS

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 10 Apr 1997 13:49:56 -0500
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>,
        "APRS SIG list   mailing"<aprssig@tapr.org>
Message-ID: <v03020934af72de3e5c62@[208.134.134.40]>
Rendered body type: text/plain

TAPR offers the Motorola ONCORE VP GPS

TAPR has worked a deal to provide the popular Motorola ONCORE VP GPS engine
at a savings for TAPR members. This now allows TAPR to provide a low-end
and high-end GPS engine to our members. For full details and pictures of
both GPS group purchases, check out http://www.tapr.org/gps/ for full
details.

The price of the Motorola ONCORE VP GPS is:
     $269.00 US for members of TAPR
     or
     $290.00 US for non-members

and will include:
   * Motorola ONCORE VP (B4121P115x) engine (2.00 x 3.25 x 0.64 in.)
   * Documentation

TAPR will be taking orders for 10+ units, which is the minimum purchase at
this time. Once at least 10 units have been purchased, TAPR will order the
ONCORE VP units. TAPR will deposit money when the units are ordered and
ship when the units arrive at the office.

Please note: This is not an enclosed/sealed unit. It is assumed that the
purchasers will be installing the unit in another enclosure for normal and
experimental operations like the TAC-2 (Totally Accurate Clock) kit
designed by Tom Clark, W3IWI, or the APRS MIC-Encoder for APRS tracking.
Both kits will be available at Dayton!

No 10% Discount for TAPR Members. Due to the nature of the purchase, the
$269 purchase price for TAPR members represents the membership discount.

Warranty. TAPR will provide replacement units for DOA units that are
promptly reported by the purchaser within 90 days after TAPR ships.

This is not a purchase list, method of payment is expected when you place
your order.

If you would like to order one of these units, you can
      e-mail tapr@tapr.org,
      phone (817) 383-0000, or
      fax (817) 566-2544.

      Office Hours: Tuesday - Friday 9am - 12pm, 3pm - 5pm Central Time

Questions concerning the unit and details on the buy will be handled on
the TAPR APRS Special Interest Group list. To subscribe,
   send e-mail to:
       listserv@tapr.org.
   In the message type
       subscribe aprssig YourFirstName YourLastName.
The server will then send you a message back. Announcements on the status
of the shipment will be made to the TAPR APRS SIG and TAPR-BB lists.

Shipping and Handling
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* Shipping and Handling within the US will be $7.00 US

by UPS Ground unless otherwise requested by purchaser.

* International Shipping will need to contact the TAPR office and get a quote on the shipping to your country. TAPR uses International Express Mail, unless the purchaser requires something else.

Frequently Asked Questions
(from a message by Tom Clark, W3IWI)

For this group purchase, the VP was chosen in lieu of the stripped-down UT & GT versions as a "does everything for everybody" universal solution -- solving the needs of the "where am I?" and "what time is it?" communities. And FYI -- the ONCORE works just fine in a balloon (no altitude limits) or airplane (travelling slower than Mach 2).

The original ONCORE was called the PVT6 and later renamed the ONCORE BASIC. It was a 70x100 mm board, had on-board DC-DC converter so that it could run from virtually any supply voltage (10-40v) and had a "real RS232" interface. Most of the BASICs were 6 channel, but a few were delivered with 8-channel firmware.

The original PVT6/BASIC served as the basis for Tom Clark's, W3IWI, original "Totally Accurate Clock" which has proved itself by delivering 20-40 nsec timing accuracy & precision. Some TAC results can be gleaned in the .gif plots on my FTP servers:

ftp://aleph.gsfc.nasa.gov/GPS/totally.accurate.clock/ or
ftp://bootes.gsfc.nasa.gov/GPS/totally.accurate.clock/

The original BASIC was phased out over the past couple of years, replaced by the slightly smaller & lower cost ONCORE VP. To make the VP smaller and save money, Motorola decided to drop the DC-DC converter (+5v supply only) and drop the "true RS232" interface in favor of an inverted-TTL serial port. While the original BASIC cost ~$400-500, the VP is now available for around $300.

Both the BASIC and VP came with a wide range of extra cost options (all of which are firmware only -- the hardware is identical). These options include a 1PPS pulse (required for the TAC), carrier phase and DGPS outputs.

In the past year, Motorola has announced two stripped-down versions of the VP targeted to specific markets -- the UT and GT. The UT was designed for the timing market and has most (but not all) of the high-accuracy timing features available in the VP. The GT is designed to be embedded into automobiles and has only position determining capabilities. One of the things that Motorola removed from the UT/GT was the ordinary, mortal ASCII NMEA messages; the GT/UT talk/listen only to proprietary Motorola binary messages, and the binary command set for each is a subset of that available in the VP/BASIC. The prices are ~$150 for the GT and ~$210 for the UT.

TAC-2 Project

About a year ago Tom Clark, W3IWI, approached TAPR about his TAC-2 project (Totally Accurate Clock) http://www.tapr.org/tapr/html/tac2.html The kit will be available before or Dayton '97.

The TAC-2 can be thought of as a "universal" OEM GPS receiver adaptor with "plug 'n play" support for any of the Motorola ONCOREs, the Garmin GPS-20 or the Trimble SK-8 receivers. It has onboard all the "real RS232" interfaces (including a 1PPS signal on the DCD handshaking line), low-impedance (lab quality) pulse drivers and power supplies you need. It also serves as a platform for the (still being developed) TAC Oscillator Controller (TOC) which will give amateurs a 1:10e9 to 1:10e10 lab-quality frequency standard (locked to GPS). The TAC-2 (complete with any of the OEM receivers) occupies a 3"x4.5"x1" volume and has a large number of user options, including

- an optional switching power supply for battery use
- "UPS" power for uninterrupted operation
- power for external GPS antenna preamp
- Mounting in your PC as if it were a disk drive
- "smart" RS232 ports for DGPS applications

MIC-E Project

The other project that the VP can be used for is the APRS MicEncoder Project http://www.tapr.org/tapr/html/mic-e.html. The MIC-E (Mic Encoder) installs between your radio mic and radio and allows your GPS unit to transmit APRS AX.25 frames at designated intervals without needing a TNC! The result is a 1200 baud position report compressed to 32 bytes including beginning and ending FLAGS. This equates to about 320ms, including CALLSIGN, DIGIPEATER PATHS, and a minimum message capability. Plus, the packets are still receivable on ANY AX.25 TNC. Very useful in many settings.

The MIC-E excepts a wide range of GPS, which the VP is one of them. You can listen to a discussion of the MIC-E by Bob Bruninga, WB4APR, while Bob uses one or read over the text about the APRS MicEncoder (http://www.tapr.org/tapr/html/virtual.html). This unit will be available on or before Dayton 97.

General Characteristics:

 Receiver Architecture
     * 8 channel
     * L1 1575.42 MHz
     * C/A code (1.023 MHz chip rate)
     * Code plus carrier tracking (carrier aided tracking)
 Tracking Capability
     * 8 simultaneous satellite vehicles

Performance Characteristics:
 Dynamics
     * Velocity: 1000 knots(515 m/s) > 1000 knots at altitudes < 60,000ft.
     * Acceleration: 4 g
     * Jerk: 5 m/s3
      * Vibration: 7.7G per Military Standard 810E
 Acquisition Time (Time To First Fix,TTFF)
     * 20 sec. typical TTFF hh (with current almanac, position, time and ephemeris)
     * 45 sec. typical TTFF (with current almanac, position and time)
     * 2.5 sec. typical reacquire
 Positioning Accuracy
     * Less than 25 meters, SEP (without SA) [DoD may invoke Selective Availability (SA), potentially degrading accuracy to 100 m (2dRMS)]
     * DGPS accuracy 1-5 meters typical
 Timing Accuracy (1 pulse Per Second, 1 PPS)
     * 130 nanosec. observed (1 to) with SA on
     * In position hold mode, <50 nanosec. observed (1 to) with SA on
 Antenna
     * Active micro strip patch Antenna Module
     * Powered by Receiver Module (25mA @ 5 Vdc)
     * Passive antenna configuration (see optional features)
 Datums
     * 49 std. datums, 2 user defined, default WGS-84

Serial Communication
 Output Messages
     * Latitude, longitude, height, velocity, heading, time, satellite tracking status
     * NMEA-0183 Version 2.00 (selected formats)
     * Software selectable output rate (Continuous or Poll)
     * Broad list of command/control messages
     * TTL interface

Electrical Characteristics:
 Power Requirements
     * 5±0.25 Vdc 50 mVp-p ripple (max)
 "Keep-Alive" BATT Power
     * External 2.5 V to 5.25 V 15µA (typ.) 60µA (max)
     * 3V on-board battery;15µA (typ.) 60µA (max)
 Power Consumption
     * 1.1 W @ 5V

Physical Characteristics:
 Dimensions
      * Receiver 2.00 x 3.25 x 0.64 in. [50.8 x 82.6 x 16.3 mm]
     * Active Antenna Module 4.01 (dia.) x 0.89 in. [102 (dia.) x 22.6 mm]
 Weight
     * Receiver 1.8 oz. (51g)
     * Active Antenna Module 4.8 oz. (136.2 g)

```
 Connectors
     * Data/Power: 10 pin (2x5) unshrouded header on 0.100" centers
     * RF: Right Angle OSX (subminiature snap-on)
 Antenna to Receiver
     * Single coaxial cable (for active antenna-6 dB Interconnection max
loss at Ll;1575.42 MHz)

Environmental Characteristics:
 Operating Temperature
     * Receiver Module -30°C to +85°C
 Humidity
     * 95% noncondensing +30°C to +60°C
 Altitude
     * 60,000 ft.(18km)(max)
     * > 60.000 ft.(18 km) for velocities <1000 knots

Miscellaneous:
 Optional features
     * 1 PPS timing output
     * Raw measurement data
     * On Board Rechargeable Lithium battery
     * On board LNA option for use with passive antenna
     * Differential GPS-standard software feature
 DGPS
     * RTCM-104 format (remote input)
     * Motorola custom format (master output and remote input)



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Notice about all TAPR Group Purchases
TAPR coordinates group purchases as a service to help amateur radio
operators obtain access to technology at prices better than those typically
available in individual unit orders.

Those participating in group purchases must understand that these products
are not part of TAPR's standard offering, that TAPR may not have an
established relationship with the vendors involved, and that the terms of
the purchase may be changed, or the purchase may be canceled, for any
reason. If purchase terms (such as price or delivery schedule)
significantly change during the order period, TAPR will notify you and
permit you a reasonable time in which to cancel your order; if you choose
to cancel, TAPR will refund any money you have deposited for the purchase.
Once TAPR has committed the group order with the vendor, no further
cancellations are permitted. IN NO EVENT WILL TAPR'S LIABILITY TO YOU
EXCEED A REFUND OF ANY MONEY YOU DEPOSITED FOR THE PURCHASE.

Although informal support for products may be available through TAPR's
on-line mailing lists and other services, product warranties and
entitlement to post-sale support are limited to what is offered by the
manufacturer, and are not TAPR's responsibility.


--------------------------------------------------------------------------
Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
--------------------------------------------------------------------------
e-mail: TAPR@TAPR.ORG  ftp: ftp.tapr.org   web: http://www.tapr.org/
--------------------------------------------------------------------------



-----
Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
-----
```

4. Update TAPR Oncore VP Purchase

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Fri, 11 Apr 1997 09:20:04 -0500
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>,
        "APRS SIG  list   mailing"<aprssig@tapr.org>
Message-ID: <v03020924af73f8ba79e6@[208.134.134.40]>
Rendered body type: text/plain
```

I made mistake when I did the section on General Characteristics for the
Oncore VP GPS unit.

The unit does not come with an antenna, as was listed in the General
Characteristics section.

Sorry about the confusion.

Cheers - Greg

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
---
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: <http://www.tapr.org/>
---

5. WIRELESS TELECOMMUNICATIONS BUREAU ANNOUNCES FREE BETA TESTING

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 15 Apr 1997 07:14:54 -0500
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v0302090aaf792168041a@[192.168.1.2]>
Rendered body type: text/plain

PUBLIC NOTICE

Federal Communications Commission
1919 M St., N.W.
Washington, D.C. 20554

Released: April 8, 1997

WIRELESS TELECOMMUNICATIONS BUREAU ANNOUNCES FREE
BETA TESTING FOR 30 DAY PERIOD

The Wireless Telecommunications Bureau is making available on a beta test basis, for approximately 30 days, free of charge, access to three database applications: 1) Amateur query; 2) frequency search program for the 929 and 931 MHz databases and; 3) database transaction downloads. The beta test period will begin on April 8, 1997 and will extend to May 12, 1997 for this first group.

Access to the programs is available through the beta test site at http://gullfoss.fcc.gov/beta.htm. The site map for the application is from the FCC home page at www.fcc.gov through to the FCC's Wireless Telecommunications Bureau internet site at http://www.fcc.gov/wtb/wirehome.html. Choose Wireless Electronic Commerce on the Wireless Bureau's home page and further choose Beta Page for Future Electronic Commerce Applications. Select your applications from the Beta Testing Page.

The applications are as follows:

Amateur - This application allows realtime query to the Amateur database using a number of parameters including dates, zip codes, licensees, and callsigns. Any comments should be e- mailed to betacomm@fcc.gov.

Frequency search program - 929 MHz and 931 MHz - This application does a radius search for a given latitude and longitude on 929 MHz or 931 MHz stations. Any comments should be e-mailed to betacomm@fcc.gov.

Transaction download - This application allows users to download from a choice of seven days transactions for each Wireless database. The various database tables are extracted into flat files. Documentation may be downloaded. Each day's data will be overwritten every seven days. At the end of the beta test period, a complete offload of the databases will be available in CD-ROM format from ITS, the FCC's public access contractor. These CD-ROM's are produced quarterly. The transactions online will enable the public to keep up to date records of the Commission's activity using the CD-ROM data as a base for initiating one's own data base. Any comments should be e-mailed to betacomm@fcc.gov.

During the beta test period, there will be no charge for access. At the end of the beta testing period, the applications will be available on the FCC's wide area network at a charge of $2.30 per minute. The first two minutes of access will be free.

Additional applications will be added to the beta testing program as they
are available including Form 900 renewal application for all services.

To enroll as an official beta tester and receive E-mail notifications
concerning the beta testing, send an E-mail to khoutz@fcc.gov.

Further questions may be directed to the Consumer Assistance Branch, toll
free 1-800-322- 1117 or to Technical Support (202) 414-1250.
-FCC-

6. TAPR STA Request for Renewal and Activity Report

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 29 Apr 1997 23:04:33 -0500
To: " Spread Spectrum "<ss@tapr.org>,
"TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v03020914af8c734f764f@[208.134.134.40]>
Rendered body type: text/plain

We just put up the STA Activity Report (all 75 pages) and request for
renewal letter both submitted to the FCC yesterday (April 28th, 1997).

Check http://www.tapr.org/ss/tapr_sta.html

We will post something here as soon as we hear about the renewal request.

Keep an eye on http://www.tapr.org/ss in May as comments from the upcoming
Docket 97-12 first comment period are made available.

Cheers - Greg, WD5IVD

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd

May 1997

Original source file: tapr-bb.9705
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1997-05/TAPR-BB_1997-05.txt

1. P3D RUDAK web page updated

From: Greg Jones <wd5ivd@tapr.org>
Date: Fri, 2 May 1997 04:01:13 -0500
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v03020906af8f5d958b4f@[208.134.134.40]>
Rendered body type: text/plain

>From Bdale Garbee <bdale@gag.com>

Lyle WA7GXD sent me some digitized pictures of various pieces of Rudak
undergoing turn-on and testing in his lab in late March. I just got around
to updating the Rudak web page to include these pictures, and Lyle's
descriptions of what's happening in each picture.

http://www.amsat.org/amsat/sats/phase3d/rudak-u/

Enjoy!

73 - Bdale, N3EUA

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2. TAPR Update for Dayton Hamvention

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sat, 3 May 1997 15:12:10 -0500
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v03020903af91472f06df@[208.134.134.40]>
Rendered body type: text/plain

Just a reminder that TAPR is doing a lot of things at Dayton and everyone
is invited to attend and participate!

Full details are available at http://www.tapr.org/tapr/html/dayton.html
with maps, schedules, and some other goodies. If you need a text version
of the information, just e-mail tapr@tapr.org

Friday is the main day of activity with the all day TAPR Digital Forum and
then that Friday night for the annual PacketBASH and TAPR Banquet. The
Banquet will be hosted again by the Miami Valley FM Association at the NCR
facility a few minutes south of Dayton. Tom Clark, W3IWI will be the after
dinner speaker with the topic of "Amateur Radio 2000: A Retrospective View
of the Future" . There will also be a prize drawings for those that are
attending! Should be a fun evening if you don't have anything planned for
Friday evening.

TAPR will also be providing live audio from Dayton on both Friday and
Saturday. If all goes well, the entire TAPR Digital Forum will be availble
on our web site http://www.tapr.org for listening to using RealAudio as the
forum happens. The radio link between the forum room and the TAPR booth
(where the Internet connection is) is planned to be over a high-speed SS
radio link, but you never know how a radio is going to handle Dayton :-)
On Saturday, TAPR is providing live audio from the the Open Ham Radio Town
Meeting from 3 - 5 PM EST (Room 5) forum host is Len Winkler, KB7LPW
(http://www.tapr.org/newsline/townmeeting.html). Check the web page to see
the schedule and topics for the session.

The TAPR Digital Forum kicks off at 1pm on Friday and there is a lot on
Spread Spectrum communications this year!!

Friday Forum Schedule (May 16th)
1:00 - 1:45pm (45 min)
* Introduction to Spread Spectrum Communications
Steve Bible, N7HPR

1:45 - 2:00pm (15min)
* Update on TAPR Activity
Greg Jones, WD5IVD and Steve Stroh, N8GNJ

2:00pm - 2:40pm (40 min)
* Building TCP/IP Networks in the Amateur Radio Community
John Ackermann, AG9V, Allan Finne, KB5SQK

2:40pm - 3:00pm (20 min)
* Review of current SS developments

Barry McLarnon, VE3JF, Dewayne Hendricks, WA8DZP

3:00 - 3:20pm (20 min)
* System Design Parameters for Spread Spectrum Systems
Tom McDermott, N5EG

3:20 - 3:40pm (20 min)
* TBA
Phil Karn, KA9Q

3:40 - 4:00pm (20 min)
* TAC-2 (Totally Accurate Clock) GPS Project
Tom Clark, W3IWI

4:00 - 4:20pm (20 min)
* Update on Amateur DSP Activity
Bob Stricklin, N5BRG, Bill Reed, WD0ETZ

4:20 - 5:00pm+
* APRS Update and TAPR APRS SIG Meeting
Bob Bruninga, WB4APR and Keith Sproul, WU2Z

3. Docket 97-12 Comments

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 5 May 1997 17:52:46 -0500
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v03020925af9414e38ac3@[208.134.134.40]>
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We have started the collection of comments from todays filings on Docket 97-12 on http://www.tapr.org/ss

The following (listed below) are now available and we expect more to be made available in the coming weeks. These represent filings that the individuals/groups sent to us directly in electronic format (thanks!). Other selected filings will take time to get up on the web page, because copies must be made in Washington DC by our lawyers, mailed to a volunter who then scans them before being made available on the web page. If you filed on Docket 97-12 and would like your comments or reply comments in the future posted with everyone elses, please send them to wd5ivd@tapr.org

Comments on Docket 97-12 available include (as of 5/5/97):

Tucson Amateur Packet Radio Corp 5/5/97
Lyle V. Johnson, WA7GXD 5/5/97
Philip R. Karn, Jr, KA9Q 5/5/97
Robert A. Buaas, K6KGS 5/5/97
Central States VHF Society 5/5/97
William A. Tynan, W3XO 5/5/97

Cheers - Greg Jones, WD5IVD
President TAPR

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
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4. First batch of MIC-Encoders at Dayton!

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Fri, 9 May 1997 04:13:09 -0500
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>,
"APRS SIG list mailing"<aprssig@tapr.org>
Message-ID: <v03020905af989921e678@[192.168.1.2]>
Rendered body type: text/plain

TAPR to offer first batch of TAPR APRS MIC-Encoders at Dayton!
May 9th, 1997

The MIC-E (Mic Encoder) installs between your radio mic and radio and allows your GPS unit to transmit APRS AX.25 frames at designated intervals without

needing a TNC! Very useful in many settings.

See http://www.tapr.org/tapr/html/mic-e.html for full details and photos
with project history and other interesting details.

The unit is a semi-kit. This means that the board has been partially
assembled, but interface wires, box, and other items still require
configuration and assembly before usage.

Units to be available at Dayton!

The first 150 units of the TAPR APRS MicEncoder will be available for sale
at Dayton Hamvention! (That is if no catastrophic failure or act of God
happens
between now and the opening of Hamvention)

In order to handle the demand at the TAPR booth -- here is the deal:

* Units will be sold beginning at 12noon (opening) on Friday of
  HamVention.

* Until Saturday 12noon, TAPR members can only purchase up to 3 units per
  member. This is to allow as many as possible to get access to the 150
  units available. If you are not a member, you can always join before
  getting your unit ;-)

* After Saturday 12noon, all non-members and TAPR members wanting additional
  units can purchase any units still available.

* No orders for units to be sold at Dayton
  *** WILL BE TAKEN AT THE OFFICE EARLY ***

* If you are not going to be attending Dayton, you can use the TAPR order
  form to place an order for units not sold at Dayton or the subsequent
  production of more kits, which should happen shortly after Dayton (2-4
  weeks).

* Orders will also be taken at Dayton for the subsequent production if
  the 150 units run out.

* There will be no s/h added to the kits sold at Dayton, but we will
  be adding the Ohio Sales Tax to all Dayton sales.

General Information

The price is:
  $134.00 US for members of TAPR + s/h (this is the TAPR 10% discount)
  or
  $149 US for non-members +s/h

and will include:

* TAPR APRS MicEncoder with parts, cabinet, and documents
  The assembly manual is available on the Web page listed above.

Discount for TAPR Members. The $134.00 purchase price for TAPR members
represents the normal 10% membership discount.

Warranty. TAPR will provide replacement units for DOA units that are
promptly reported by the purchaser within 90 days after TAPR ships.

Notice regarding TAPR APRS MicEncoder Purchases.

Shipping and Handling

* Shipping and Handling within the US will be $7.00 US by UPS Ground
  unless otherwise requested by purchaser.

* International Shipping will need to contact the TAPR office and get a
  quote on the shipping to your country. TAPR uses International Express

Mail, unless the purchaser requires something else.

Discussion

As mobile GPS/APRS continues to grow, we can eliminate the need for every mobile to have a TNC, digital radio, and second antenna by simply integrating the position report into a very brief tone burst at the end of a voice transmission over any two-way radio. The APRS MIC-Encoder is this solution. With the MIC-E, no additional hardware is required in the vehicle, other than a GPS unit. The system not only reports position and vehicle type, but also one of 7 canned messages and 4 analog telemetry values.

Your APRS MIC-Encoder Unit will provide you a quick, easy means of tracking your mobile operations when properly interfaced with your existing voice radio. Before operating your MIC-E on the air, you should inquire about APRS operations in your immediate area. Check 145.79 MHz (U.S.), 144.39 Mhz (Canada), and some areas may also use 145.01 MHz. By contacting APRS users in your local area you may find particular voice repeaters that already support MIC-E operations with a cross-band link to the local APRS network.

In order to make the APRS LOCATOR SYSTEM practical, the MIC-ENCODER has been designed with several design concepts:

* Interfaces to UNMODIFIED radios via the MIC connector
* Uses standard AX.25 for compatibility with existing TNC1s
* Compresses position report into about 0.3 seconds
* Uses low enough in power to be powered from the MIC jack
* Accepts the readily available NMEA output from GPS receivers
* Optionally provides 4 analog channels for telemetry

The result is a 1200 baud position report compressed to 32 bytes including beginning and ending FLAGS. This equates to about 320ms, including CALLSIGN, DIGIPEATER PATHS, and a minimum message capability. Plus, the packets are still receivable on ANY AX.25 TNC.

The MIC-E installs between your radio mic and radio and allows your GPS unit to transmit APRS AX.25 frames at designated intervals without needing a TNC! Very useful in many settings. Internal GPS units supported include the Garmin GPS-20, Motorola Oncore VP, Trimble, and others. Any external GPS can be used if it provides NMEA output.

The heart of the MIC-E is a PIC chip processor that is now sold commercially by Clements Eng. In 1996, Gwyn Reedy, W1BEL, President of PacComm approached TAPR about handling the amateur version in a semi-kit solution. The TAPR APRS MIC-E is the result of the collaborative process begun in October 1996 and finished in May of 1997.

APRS and MicEncoder are trademarks of Bob Bruninga, WB4APR.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
---
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: <http://www.tapr.org/>
---

5. TAPR @ Dayton HamVention

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 13 May 1997 14:37:50 -0500
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03020900af9e634ad004@[192.168.1.2]>
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Just a reminder that TAPR is doing a lot of things at Dayton and everyone is invited to attend and participate!

Full details are available at http://www.tapr.org/tapr/html/dayton.html with maps, schedules, and some other goodies.

Friday:

1pm - 4:20pm (ET) You can listen to the TAPR Digital Forum held at
HamVention via http://www.tapr.org/tapr/html/daytonlive.html

7pm - Annual PacketBASH and TAPR Banquet
Speaker: Tom Clark, W3IWI will be the after dinner speaker with the topic
of "Amateur Radio 2000: A Retrospective View of the Future" . Get your
dinner ticket at the TAPR booth before 5pm Saturday and some walk ups can
be accommodated.

There will be a book signing time before and after dinner with Tom
McDermott, N5EG, on his new TAPR Wireless Digital Communications Book. Tom
will also be available on Saturday to sign his book at the TAPR booth.

Saturday:
3pm - 5pm (ET), TAPR will be providing audio from the Open Town Meeting
hosted by Len Winkler, KB7LPW.
http://www.tapr.org/newsline/townmeeting.html This will be the third such
live audio amateur radio meeting made available by TAPR at an amateur radio
conference.

The TAPR booth will be at its normal location. We will have 150 MIC-E
units available along with a few other various TAPR kits, CD-ROM,
publications, and more!

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 817-383-0000
---
e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org   web: <http://www.tapr.org/>
---

6. APRS SIG Chair Changes

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 19 May 1997 14:53:45 -0500
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>,
        "APRS SIG list   mailing"<aprssig@tapr.org>
Message-ID: <v03020901afa6598d4df5@[192.168.1.2]>
Rendered body type: text/plain

Topic: New APRS SIG Moderator/Chairperson

I'm pleased to announce that Stan Horzepa, WA1LOU (wa1lou@tapr.org), is the
new APRS SIG moderator and chairperson.

Stan is very active in APRS SIG and he has been a great supporter of the
activity for several years now. Keith Sproul, WU2Z, who was responsible
for the formation of the APRS SIG will be able to spend more time
supporting the APRS community through further software and technical
developments.

Please join me in welcoming Stan to his new role.

Larry Keeran, K9ORP, will continue to be the APRS SIG ftp file manager.
Larry has been doing a super job in keeping the files orgnaized in the APRS
SIG area. Thanks Larry!

73, Greg Jones, WD5IVD
President, TAPR

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd

June 1997

Original source file: tapr-bb.9706
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1997-06/TAPR-BB_1997-06.txt

1. Reply Comments Docket 97-12 on SS Issues

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Fri, 6 Jun 1997 02:26:53 -0500
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>,
" Spread Spectrum "<ss@tapr.org>,
"TAPR Spread Sprctrum" <ss-sta@tapr.org>,
"NETSIG list mailing"<netsig@tapr.org>,
"TAPR Spread Sprctrum" <ss-sta@tapr.org>
Message-ID: <v03020933afbd6ab9f5ad@[192.168.1.2]>
Rendered body type: text/plain

Reply comment deadline for FCC Docket 97-12 (In the Matter of Amendment of Amateur Service Rules to Provide For Greater Use of Spread Spectrum Communication Technologies) was yesterday June 5th.

TAPR has started posting reply comments on our Spread Spectrum web page: http://www.tapr.org/ss go to the link "Spread Spectrum Rule Changes (RM-8737 & Doc. 97-12)"

The following reply comments are currently available for reading:

Tucson Amateur Packet Radio Corp 6/5/97
Lyle Johnson, WA7GXD 6/5/97
Glen Elmore, N6GN 6/5/97
Robert Buass, K6KGS 6/5/97
John Ackermann, AG9V 6/5/97
Steve Dimse, K4HG 6/5/97
Tom McDermott, N5EG 6/5/97
John R Bingham, W7WKR 6/5/97
John Koster, W9DDD 6/5/97

We expect to have more posted over the coming month as others send us electronic copies and we get copies of other filings directly from the FCC.

If you filed a reply comment and would like to have it available on the web page, please drop me an e-mail message with the text of the reply comment.

Cheers - Greg Jones, WD5IVD

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e-mail: TAPR@TAPR.ORG ftp: ftp.tapr.org web: <http://www.tapr.org/>
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2. Update to Reply Comments

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 9 Jun 1997 15:03:15 -0500
To: "TAPR Spread Sprctrum" <ss-sta@tapr.org>, " Spread Spectrum "<ss@tapr.org>,
"TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v03020948afc211a8248d@[192.168.1.2]>
Rendered body type: text/plain

TAPR has started posting reply comments on our Spread Spectrum web page: http://www.tapr.org/ss then go to the link "Spread Spectrum Rule Changes (RM-8737 & Doc. 97-12)"

As of 6/9/97 the following reply comments are available on Docket 97-12

Tucson Amateur Packet Radio Corp 6/5/97
ARRL 6/5/97
Lyle Johnson, WA7GXD 6/5/97
Glenn Elmore, N6GN 6/5/97
Robert Buaas, K6KGS 6/5/97
John Ackermann, AG9V 6/5/97
Steve Dimse, K4HG 6/5/97
Tom McDermott, N5EG 6/5/97
John R Bingham, W7WKR 6/5/97
John Koster, W9DDD 6/5/97

Anthony McConnell, N3JLI and Jacob Brodsky, AB3A 6/5/97
James Barron, Jr, KA5WSS 6/5/97
Robert J. Carpenter 6/5/97
Steven K. Stroh, N8GNJ 6/5/97

Comments that we think where filed, but haven't gotten on the web page include:
NCS
W5YI
Bill Tynan
AMSAT

and some others I am sure...

Cheers - Greg, WD5IVD

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
-----

3. Additional Reply Comments on Docket 97-12 (SS)

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 10 Jun 1997 05:17:33 -0500
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v0302096eafc2da104118@[192.168.1.2]>
Rendered body type: text/plain

This is now the current list of reply comments to Docket 97-12 regarding Amendment of the Amateur Service Rules to Provide For Greater Use of Spread Spectrum Communication Technologies:

Tucson Amateur Packet Radio Corp 6/5/97
ARRL 6/5/97
Lyle Johnson, WA7GXD 6/5/97
Glenn Elmore, N6GN 6/5/97
Robert Buaas, K6KGS 6/5/97
John Ackermann, AG9V 6/5/97
Steve Dimse, K4HG 6/5/97
Tom McDermott, N5EG 6/5/97
John R Bingham, W7WKR 6/5/97
John Koster, W9DDD 6/5/97
Anthony McConnell, N3JLI and Jacob Brodsky, AB3A 6/5/97
James Barron, Jr, KA5WSS 6/5/97
Robert J. Carpenter 6/5/97
Steven K. Stroh, N8GNJ 6/5/97
THE W5YI GROUP 6/5/97
AMSAT 6/5/97
Central States VHF Society 6/5/97
Bill Tynan, W3XO 6/5/97

http://www.tapr.org/ss use the link regarding rule making.

There are maybe just a few additional comments to complete the record. Thanks to all those that have sent electronic copies of their filings. I believe it helps everyone to see what positions are being taken and discussed regarding this important rule making process.

Cheers - Greg, WD5IVD

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
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4. 1997 DCC Call for Papers (Reminder)

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 16 Jun 1997 13:17:35 -0500
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v03020935afcb31314f32@[208.134.134.40]>
Rendered body type: text/plain

Call for Papers

1997 ARRL and TAPR Digital Communications Conference
October 10-12, 1997
Baltimore, Maryland (minutes from BWI airport)

Web: http://www.tapr.org/dcc

It's that time again! Time to mark your calendar and think about what to publish for the upcoming 16th Annual ARRL and TAPR Digital Communications Conference.

The 1997 ARRL and TAPR Digital Communications Conference will be held October 10-12, 1997 in Baltimore, Maryland. This year's conference location is just minutes away from the BWI (Baltimore/Washington International) Airport.

For full details on the conference see http://www.tapr.org/dcc or contact the TAPR office for the DCC information flyer.

Call for Conference Proceeding Papers

Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the Conference is not required for publication. If you know of someone who is doing great things with digital communications, be sure to personally tell them about this! Papers are due by August 20th, 1997, and should be submitted to Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111 or via the Internet to lweinberg@arrl.org. Information on paper submission guidelines are available on-line (http://www.tapr.org/dcc) or can be mailed.

Contact TAPR to register of for more information on the DCC.

Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road #337, Tucson, AZ 85749-9399. Phone: (940) 383-0000. Fax: (940) 566-2544.
Internet: tapr@tapr.org http://www.tapr.org

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
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5. Motorola Oncore VP Interface Board kit

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 22 Jun 1997 15:22:21 -0500
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v03020914afd337305d9f@[208.134.134.40]>
Rendered body type: text/plain

Motorola Oncore VP Interface Board kit

TAPR is proud to offer a Motorola Oncore VP Interface Board kit, designed by Doug McKinney, KC3RL. It is a compact 5 volt power supply and RS-232 interface board for the Oncore VP Global Positioning System (GPS) receiver. All parts are included - including screws and stand-offs. It is the same size as a Motorola Oncore VP 2" x 3.25" x 0.95" (with stand-offs). RS-232 interface for input and output control. DGPS input (select RS-232 interface between computer or DGPS control). High-efficiency LM2574 step-down regulator provides 5 VDC from 7-30 VDC input.

The price is:

$31.50 US for members of TAPR
or
$35.00 US for non-members

+ $5.00 shipping/handling

For information on the VP Interface Board kit:

http://www.tapr.org/gps/vpib.html

For information on the TAPR Motorola Oncore VP Group Purchase:

http://www.tapr.org/gps/oncore.html

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e-mail: tapr@tapr.org ftp: ftp.tapr.org web: <http://www.tapr.org/>
---

6. TAPR TAC-2 (Totally Accurate Clock)

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 24 Jun 1997 18:05:17 -0500
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v03020920afd6022a83e4@[208.134.134.40]>
Rendered body type: text/plain

TAPR TAC-2 (Totally Accurate Clock)
http://www.tapr.org/tapr/html/tac2.html

It is with considerable pleasure that TAPR can announce that version 2 of "Totally Accurate Clock" (TAC-2) is now available in kit form. TAPR has been working with Tom Clark, W3IWI, to make an improved version of the TAC available to all. TAC-2 Rev.C of the kit is now available from TAPR.

The "Totally Accurate Clock" TAC-2 kit is intended to serve several purposes:

* It provides a "universal" electrical and mechanical interface for a number of common OEM board-level GPS receivers including specifically:
  - Garmin GPS-20
  - Motorola Oncore
  - Trimble SK8
* It provides interfaces for the 1 pulse-per-second (1PPS) signal generated by these receivers:
  - Low-impedance, fast rise-time 1PPS signals for "laboratory" applications.
  - RS232 level 1PPS signals for computer applications.
  - Specialized 1PPS interfaces for an add-on PCB that will stabilize a low-cost crystal oscillator to an accuracy ~ 1 part-per-billion
* It provides several different power supply options to make use of your GPS receiver easier. The power interface is similar to (and compatible with) those used for computer disk drives:
  - A low-cost, (7805-type) regulator.
  - A high-efficiency switching power supply.
  - Direct 5 volt power.
* It has provision for an Uninterruptable Power Supply (UPS) to buffer the GPS receiver through brief power outages.
* It provides Battery Backup so the GPS receiver can wake up "smart."
* It can provide isolated power for an amplified GPS antenna.

Since the TAC-2 has so much flexibility, there are several options you will have to choose from during construction. The "base" implementation will satisfy the needs of many radio amateurs with support for the Garmin GPS-20 and Motorola ONCORE Basic receivers. A few jumper changes enable support for the Motorola ONCORE VP/UT receiver. Some added parts and some more jumper changes are needed if you plan to use a Trimble SK-8.

The TAC-2 is offered as a kit which will take approxiamtely 2 or 3 hours to build.

The TAC-2 kit has been designed to be very easy to assemble. TAPR supplies detailed "Heathkit-like" instructions that only require you to know which end of the soldering iron is hot and a little knowledge on how to put things together!

One of the major interests that TAPR has in GPS timing is in the use of GPS as a way to steer ("discipline") an oscillator. By tying together a low-cost

crystal oscillator and a GPS receiver, it is possible to have a
Rubidium-class (better than one part per billion) frequency standard. The
TAC-2 has been designed to support this function and the TAC-2 project team
is working on developing the "TOC" (TAC Oscillator Controller). The plan is
that the TOC will plug directly into the TAC-2 circuit board. More
information on this project will be made available as progress is made.
No time is set for delivery of this daughterboard at this time.

General Information

The price is:
     $125.00 US for members of TAPR
     or
     $139.00 US for non-members

     plus shipping and handling (see below).

and will include:

   * TAC-2 Rev C PCB Board
   * All necessary parts for the TAC-2 to allow interface to either the
     Oncore VP or Garmin GPS-20
   * Documentation

Please note: This is not an enclosed unit. Enclosures are being worked on,
but will not be availble until the fall.

If you would like to order one of these units, you can

     e-mail tapr@tapr.org,
     phone (940) 383-0000,
     fax (940) 566-2544.

     or use the on-line TAPR Order form.

     Office Hours: Tuesday - Friday 9am - 12pm, 3pm - 5pm Central Time

Questions concerning the unit and details on the buy will be handled on the
TAPR GPS Special Interest Group list.

Shipping and Handling

   * Shipping and Handling within the US will be $5.00 US by UPS Ground
     unless otherwise requested by purchaser.

   * International Shipping will need to contact the TAPR office and get a
     quote on the shipping to your country. TAPR uses International Express
     Mail, unless the purchaser requires something else.

What changes where made between the version 1 and version 2 designs

   * The circuitry has been improved in a number of areas:
        o better low-Z 1PPS buffers.
        o better RS232 drivers.
        o full "Plug 'n Play" support for any of the Motorola ONCORE
          receivers (the original PVT-6/BASIC, the 8-channel VP or the new
          UT-series) and several other receivers as well.

   * A number of power supply options have been provided, including
        o the TAC-2 can look like a "disk drive" when mounted in a PC
        o an optional high-efficiency switching power supply
        o an UPS (uninterruptable power supply) capability (good for a few
          minutes)
        o an optional regulator for external antenna bias
        o several BBRAM "keep alive" power options, etc.

   * The off-board connections for the original TAC were all soldered wires.
     On the TAC-2, we made extensive use of IDC ("crimp-on") connectors for
     ease of assembly and reliability.

   * The ONLY significant deletions from the original TAC are:
        o the on-board MMIC L-band RF amplifier.
        o The original GSFC-supplied TACs were in a metal box (we used

off-the-shelf RS232 "A/B" switch boxes). The TAPR TAC-2 is a kit-form circuit board. You have to provide your own mechanical mounting (for the time being).

- An A/B switch box would work fine as a mounting. Another possibility is that the TAC-2 circuit boards are about the size of a small computer disk drive and the power connection is the same as on a disk drive. TAPR is planning a mounting that would put the TAC-2 in a disk drive bay inside your PC.

Totally Accurate Clock (TAC)

Excerpts from TOTALLY ACCURATE CLOCK ANNOUNCEMENT, Tom Clark, NASA/GSFC (February 2, 1995)

The "TAC" name is supposed to invoke a smile on your face. Many of you remember Heathkit's "Most Accurate Clock" (a WWV receiver) and I see advertisements for VLF clocks (WWVB in USA, DCF77 in Europe) that still use the "Most Accurate Clock" name in their advertising. Since the "TAC" is 3-4 orders of magnitude better than the "Most Accurate Clock" units, the "Totally" name seems warranted (also, TAC are my initials and this was begun as a home project!).

The TAC project began when I was on sabbatical at Onsala when Bernt Ronnang got me an early prototype of a Motorola PVT-6 OEM GPS receiver. In that incarnation, the PVT-6 was pretty disappointing. When I got back home, I had Motorola update the internal firmware and found that its personality had changed completely -- it was now very precise, but it had about a 500 nsec bias. I contacted a friend at Motorola who was involved in the PVT-6 software and he told me that tests at USNO had uncovered the same error. I was added to the "beta" group, got my initial prototype updated with the latest firmware and began more detailed testing. What I then found was that the PVT-6 receiver had the best timing performance I have seen in any small GPS receiver. With a small amount of care in setting it up, it now gives 50 nsec or better RMS timing precision and biases appear to be < 20 nsec.

The TAC project now involves both hardware and software. Let me briefly describe both to you.

HARDWARE:

The core of the TAC consists of a GPS. Several are going to be supported in the TAC-2 design (Motorola ONCORE, Garmin GPS-20, Trimble SK-8) The circuit board allows these various GPS to be mounted to the board.

The TAC-2 adds a number of desirable features:

* The 1 PPS output signals are buffered through a 74AC04 gate to improve the drive capabilities and to act as a "fuse" to prevent damage to the receiver in case of an operator goof. Up to three independent buffered outputs are provided, and the buffers will drive about +2 to +2.5 volts into a 50 ohm termination. The normal logic polarity is positive going at the epoch time, but this can be inverted if desired by some simple jumpers.

* Up to three open collector 1PPS signals are also available, negative going. Normally these would be used to drive display LEDs, but they can be used for other purposes.

* The add-on board includes an RS232 driver that provides 1 PPS time synchronization to an attached computer. The 1 PPS signal is normally connected to the computer's DCD input.

* The RS232 I/O to the computer is buffered and isolated from the receiver to act as a "fuse" to prevent damage to the expensive receiver in case of an operator goof. An RS232 OR-gate is supplied for the receiver input signal to allow RTCM SC104 Differential GPS signals to be fed to the GPS receiver.

SOFTWARE:

A program called SHOWTIME displays the current time in BIG DIGITS you can

see from across the room. In addition to just showing the UTC time, it includes a display of the date, day-of-week, day-of-year, local and Greenwich Mean Sidereal times, JD and MJD, and even the current GPS week. You can enable audible "WWV-like" time ticks to assist you in setting the formatter (or your wrist-watch). You can have the software automatically reset the PC's internal clock with about 25 msec accuracy. All the time display updates and audible ticks happen synchronously with the GPS 1 PPS signal because the PC reads the tick on its DCD line.

SHOWTIME allows you enter timing offsets and handles all the arithmetic for you. It allows you to make easy corrections for time delays in cables and the instrument and it tells you (with 1 nsec resolution) the actual epoch of the 1PPS tick and it gives you an estimate of the accuracy of the tick. SHOWTIME gives you a nice display of which satellites you using and which satellites are above the horizon. This includes a bar-graph "S- meter" for each of the GPS satellites currently in lock which are updated once per second.

The software lets you change operating modes (timing vs. position, elevation masks, satellite selection criteria, etc) easily and when you are running in position-determination mode, it will handle all the position averaging tasks for you. At any time, you can save the current configuration (positions, timing offsets, receiver modes, etc) to a disk file and restore that configuration at a later time.

At this time SHOWTIME runs stand-alone on a separate MS-DOS PC (but it does seem to run OK in the DesqView multitasker). Once you have set parameters into the GPS receiver, the PC operations can be terminated.

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Internet e-mail: tapr@tapr.org

July 1997

Original source file: tapr-bb.9707
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1997-07/TAPR-BB_1997-07.txt

1. $99 GPS -- Special Offer from GARMIN!

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Wed, 9 Jul 1997 05:17:34 -0500
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03020900afe9149ae857@[192.168.1.2]>
Rendered body type: text/plain
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<http://www.tapr.org/gps>

*** Special One Time offer on the GARMIN GPS-30PC for $99 ***

offer ends August 30th, 1997

General Information:

The price is:
$94.00 US for members of TAPR
$ 5.00 shipping/handling

Total Price: $99

and will include:
- GARMIN GPS-30PC
- Documentation for GPS-20 and interface to GPS-30PC

GARMIN has made available to TAPR members for a short time only the GARMIN GPS-30 PC, which GARMIN has discontinued and is wanting to clear from their inventory.

TAPR will take orders from now till August 30th, when we will place one order for as many units as the TAPR membership wishes to purchase. There is no limit to the number any one person or affiliated group wants to purchase. Although there is a total of some 700 units being made available to TAPR.

The GPS-30PC is a GPS-20 packaged with a passive antenna in a weatherproof housing with a 10 foot cable terminated in a DB9 connector (for serial port 1) and a cigarette lighter connector (for power). Since it only uses one serial port, it is not DGPS capable. The insides implement all features of the GPS-20, but the cabling only reveals serial port 1 and the power supply. You can cut the case open to get to the other signals if desired. The GPS-20 also is wired directly to the antenna, so if you remove the antenna from the GPS-20 an MCX connector will have to be connected to the GPS-20 to provide an antenna connection. Surface MCX connectors that will work are available from DigiKey and Mouser.

The price to TAPR members is $94 plus $5 shipping/handling for a total priceof $99. A normal GPS-20 unit alone sells to TAPR members for $169 !!! Then add a $40 or more antenna and you have the same functionality of the GPS30PC for a real experimenters price.

TAPR will take orders for this special one time item till August 30th. At that time we have to cut a check to GARMIN and get the units shipped.

Since this is a liquidation there are several conditions to the special offer.

*** Please be sure you read all the following very carefully. ***

* GARMIN has stated that most of these units are in good working condition, but some of them may occasionally fail to acquire satellites at ambient temperatures near 40 degrees F. Usually, this problem can be fixed by resoldering the shields near the board edge connector more carefully. For the typical consumer who deals with GARMIN, this is a

return issue; however, for amateur radio experimenters correcting this problem should not be to serious to handle.

* The downside to working on the 'sealed antenna unit with GPS-20' is that to resolder the shields, you have to remove the case by sawing or cutting the bottom off. That means that in order to rework the board, you have to damage/harm the case.

* The upside is that for $99 you get a GPS-20 engine and antenna. Even if you have to perform surgery to get one or the other to operate correctly, you have still saved money for your time and effort. The GPS-20 is worth the $99.

* This is an 'as is' deal since this is a liquidation by GARMIN on a unit that they have discontinued and are trying to remove from inventory. The normal sales price was $300. If you decide to return your unit, because it is inoperative, TAPR will not be able to return the unit to GARMIN. These are again 'as is' units, which is the reason for the great price. They should for the most part all work, but things do happen. To take care of members that have units that are Dead on Arrival (DOA), TAPR will accept returned non-functional units within the first 60 days after TAPR ships. See the refund policy below.

  If anyone is interested in troubleshooting the returned units, we will be glad to make a deal -- contact Greg Jones, wd5ivd@tapr.org.

Warranty and Refund Policy.
TAPR will accept returned non-functional units promptly reported by the purchaser within 60 days after TAPR ships. These units are provided on an "as-is" basis and no refunds will be given; however, members returning non-functional units (within 60 days) will receive an extension to their TAPR membership of three years.

If you would like to order one or more of these units, you can
e-mail tapr@tapr.org,
phone (940) 383-0000,
fax (940) 566-2544.

Office Hours: Tuesday - Friday 9am - 12pm, 3pm - 5pm Central Time

Questions concerning the unit and details on the buy will be handled on the TAPR GPS Special Interest Group list.

Shipping and Handling

* Shipping and Handling within the US will be $5.00 US by UPS Ground unless otherwise requested by purchaser.

* International Shipping will need to contact the TAPR office and get a quote on the shipping to your country. TAPR uses International Express Mail, unless the purchaser requires something else.

Notice about all TAPR Group Purchases

TAPR coordinates group purchases as a service to help amateur radio operators obtain access to technology at prices better than those typically available in individual unit orders.

Those participating in group purchases must understand that these products are not part of TAPR's standard offering, that TAPR may not have an established relationship with the vendors involved, and that the terms of the purchase may be changed, or the purchase may be cancelled, for any reason. If purchase terms (such as price or delivery schedule) significantly change during the order period, TAPR will notify you and permit you a reasonable time in which to cancel your order; if you choose to cancel, TAPR will refund any money you have deposited for the purchase. Once TAPR has committed the group order with the vendor, no further cancellations are permitted. IN NO EVENT WILL TAPR'S LIABILITY TO YOU EXCEED A REFUND OF ANY MONEY YOU DEPOSITED FOR THE PURCHASE.

Although informal support for products may be available through TAPR's
on-line mailing lists and other services, product warranties and
entitlement to post-sale support are limited to what is offered by the
manufacturer, and are not TAPR's responsibility.

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd
-----

2. TAPR.ORG Outage

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 10 Jul 1997 11:49:33 -0500
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Cc: " TAPR SYS "<tapr-sys@tapr.org>
Message-ID: <v03020904afeac26a1818@[129.120.54.53]>
Rendered body type: text/plain

TAPR.ORG was off line most of July 9th, 1997, when the building that the
system is located blew its transformer. Several hours after the power
failure, the batteries in the UPS finally gave up the ghost. The system
was back on-line this morning once power was restored.

If you posted something and it didn't make it to the system or the office,
please resend.

Cheers - Greg, WD5IVD

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd

August 1997

Original source file: tapr-bb.9708
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1997-08/TAPR-BB_1997-08.txt

1. TAPR Server to be down 8/9/97

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Fri, 8 Aug 1997 22:24:44 -0500
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>,
        "TAPR   APRS SIG"<aprssig@tapr.org>,
        "HF SIG  list   mailing"<hfsig@tapr.org>,
        "NETSIG  list   mailing"<netsig@tapr.org>,
        "BBS SIG  list   mailing"<bbssig@tapr.org>,
        " Spread Spectrum "<ss@tapr.org>, " TAPR SYS "<tapr-sys@tapr.org>,
        " tapr-tnc "<tapr-tnc@tapr.org>, aprs-fl@tapr.org,
        " tacgps "<tacgps@tapr.org>,
        TAPR Regional Freq <regional_freq@tapr.org>,
        " TAPR/AMSAT DSP "<dsp@tapr.org>, " DSP-93 Build "<dsp-93@tapr.org>,
        " TPRS Board "<tprs-board@tapr.org>
Message-ID: <v03020900b01191cb3c5c@[208.134.134.40]>
Rendered body type: text/plain
```

I just received a call informing us that the building location where the TAPR.ORG server is located will be without power tomorrow for most of the day.

We will be shutting down the server between 7am and 8am and don't expect that it will be available until late Saturday evening when power is restored.

Cheers - Greg, WD5IVD

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd

"Before you become too entranced with gorgeous gadgets
 and mesmerizing video displays, let me remind you that
 information is not knowledge, knowledge is not wisdom,
 and wisdom is not foresight. Each grows out of the other
 and we need them all."   -Arthur C. Clarke

2. 1997 DCC Call for Papers (Reminder)

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 11 Aug 1997 00:00:32 -0500
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>,
        "HF SIG  list   mailing"<hfsig@tapr.org>,
        " Spread Spectrum "<ss@tapr.org>
Message-ID: <v03110704b0144c672205@[208.134.134.40]>
Rendered body type: text/plain
```

Call for Papers

1997 ARRL and TAPR Digital Communications Conference
October 10-12, 1997
Baltimore, Maryland (minutes from BWI airport)

Web: http://www.tapr.org/dcc

It's that time again! Time to mark your calendar and think about what to publish for the upcoming 16th Annual ARRL and TAPR Digital Communications Conference.

The 1997 ARRL and TAPR Digital Communications Conference will be held October 10-12, 1997 in Baltimore, Maryland. This year's conference location is just minutes away from the BWI (Baltimore/Washington International) Airport.

For full details on the conference see http://www.tapr.org/dcc or contact the TAPR office for the DCC information flyer.

Call for Conference Proceeding Papers

Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the Conference is not required for publication. If you know of someone who is doing great things with digital communications, be sure to personally tell them about this! Papers are due by August 20th, 1997, and should be submitted to Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111 or via the Internet to lweinberg@arrl.org. Information on paper submission guidelines are available on-line (http://www.tapr.org/dcc). Submissions can be e-mailed.

Contact TAPR to register of for more information on the DCC.

Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road #337, Tucson, AZ 85749-9399. Phone: (940) 383-0000. Fax: (940) 566-2544.
Internet: tapr@tapr.org http://www.tapr.org

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 940-383-0000

e-mail: tapr@tapr.org ftp: ftp.tapr.org web: <http://www.tapr.org/>

September 1997

Original source file: tapr-bb.9709
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1997-09/TAPR-BB_1997-09.txt

1. TAPR Office Internet

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sat, 6 Sep 1997 13:30:32 -0500
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>,
        " TAPR SYS "<tapr-sys@tapr.org>
Message-ID: <v0311070fb03750ec36b4@[208.134.134.40]>
Rendered body type: text/plain
```

The TAPR office lost its Internet connection this last week. We hope to
have the office connected back up as soon as possible.

For the time being we are printing out e-mail orders and faxing them to
Dorothy at the office. This means she is getting orders as normal, but she
can't reply back to them very easily.

If you are placing an order, you might want to fax (940) 566-2544 for the
next week until the connection issue is corrected or call (940) 383-0000 to
place your order. You can always leave a message on the office phone
system by pressing 0 (zero) at anytime during the menus.

Cheers - Greg, WD5IVD

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd

    "Before you become too entranced with gorgeous gadgets
     and mesmerizing video displays, let me remind you that
     information is not knowledge, knowledge is not wisdom,
     and wisdom is not foresight. Each grows out of the other
     and we need them all."   -Arthur C. Clarke

2. GPS-30PC Offer Extension

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sat, 6 Sep 1997 14:43:08 -0500
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>, " tacgps "<tacgps@tapr.org>
Message-ID: <v0311071eb03761f03674@[208.134.134.40]>
Rendered body type: text/plain
```

With the demand for the GPS30PC and the PSR getting out about 3 weeks late,
Garmin has given us an extension until Sept 15th now to take orders for the
GPS30PC.

If you still want to get a GPS30PC, just call the TAPR office (940)
383-0000 or fax (940) 566-2544.

E-mail is down at this time, so phone or fax please.

For details, check out http://www.tapr.org/gps

Cheers - Greg, WD5IVD

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd

    "Before you become too entranced with gorgeous gadgets
     and mesmerizing video displays, let me remind you that
     information is not knowledge, knowledge is not wisdom,
     and wisdom is not foresight. Each grows out of the other
     and we need them all."   -Arthur C. Clarke

3. 1997 ARRL & TAPR Digital Communications Conference

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 18 Sep 1997 11:46:46 -0500
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v0311070bb046fa4a1af3@[208.134.134.40]>
Rendered body type: text/plain

Plans for the 1997 ARRL and TAPR Digital Communications Conference are well under way. If you haven't heard yet, the DCC will be held on October 10-12th just outside Baltimore, Maryland at the BWI Holiday Inn.

This year has some very interesting seminars, symposiums, and special events happening. Besides the main paper session which is all day Saturday covering APRS, DSP, HF, Linux, Spread Spectrum, and more. Yutaka Sakurai, JF1LZQ who is Vice President of Japan's Packet Radio User's Group (PRUG), will be this year's Banquet speaker. His talk is entitled, "Japan's PRUG: A look at its history and a view to the future". He will discuss the history of the PRUG from its early beginnings in the mid-80's and track its development to today. He will also discuss some of PRUG's current projects and its goals for the future.

There are few activities where the importance of your participation can be so much fun and important! What a great way to share and renew your enthusiasm for digital amateur radio! Getting together with colleagues from all over the world and bringing each other up to date on your latest work. All this, and more, for an unforgettable weekend of ham radio and digital communications. Make your travel and lodging arrangements now. We hope to see you at the ARRL and TAPR Digital Communications Conference October 10-12!

Full information on the conference and hotel information can be obtained by contacting Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road, Tucson, AZ 85749-9399. Phone: (940) 383-0000. Fax: (940) 566-2544. Internet: tapr@tapr.org Web: http://www.tapr.org

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The conference is not just for the digital expert. This year's conference will again provide an entire session strand with beginning, intermediate, and advanced presentations on selected topics in digital communications. Some of the topics will include: APRS, Satellite Communications, TCP/IP, Digital Radio, Spread Spectrum and other introductory topics. Come to the conference and hear these topics presented by the experts! Don't miss this opportunity to listen and talk to others in this area.

In addition to the presentation of papers on Saturday, three symposiums/seminars will be held before and after the conference. These sessions are provided to allow those with additional time and interest to make the most of the Digital Communications Conference. For those that might have interest in just a symposium or seminar, registration for the conference is not necessary to register and attend one or more of the symposiums and seminars. This allows maximum flexibility for those that might want to participate during the Digital Communications Conference, but do not have an entire weekend to devote to the event.

A full day symposium on Friday covering APRS will be conducted by Bob Bruninga, WB4APR (father of APRS) , Keith Sproul, WU2Z, Mark Sproul, KB2ICI (developers of Mac and Windows APRS), Steve Dimse, K4HG (developer of javAPRS), and other nationally known APRS leaders. Join this group for the afternoon and evening for in depth discussions and presentations on the current and future status of APRS. This is a unique opportunity to gain insight into this fast growing digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning System).

Starting late Friday afternoon a half-day seminar entitled "RF Basics for Computer Weenies: Helping the RF-challenged get the most out of the new high-speed wireless toys" will be presented by Mike Cheponis, K3MC. The seminar will focus on such topic as basic antenna types and their characteristics, comparison of feedlines and connector types, propagation basics (calculation of path loss, multipath effects, fresnel zones, etc), weatherproofing, lightning protection, filters, basic RF measurements, and other issues related to maintaining radio equipment on the UHF/SHF bands. This seminar will be starting late enough in the afternoon on Friday to allow those flying on that day to attend the seminar.

On Sunday morning, Dewayne Hendricks, WA8DZP, Phil Karn, KA9Q, and Tom McDermott, N5EG, will conduct a seminar focusing on "Spread Spectrum system design and theory." All three presenters are well known for their work in various areas of amateur digital communications and this 5 hour seminar should be an excellent opportunity to learn about the design and theory of spread spectrum systems. This seminar is a follow up to the past two

seminars of PCS technology by Dewayne with a new focus on system design.

Sunday afternoon will see the first ever DCC APRS Roadralley. Details will
be available at the DCC.

The following papers are in this years proceedings and the abstracts can be
found on http://www.tapr.org/tapr/html/cnc16.html

* Amateur Radio and the Linux Operating System
* Amateur Radio on Manned Space Vehicles: Improving Amateur Radio's Future
Through Enhanced Space Frequencies
* An AMSAT Mobile TRAKNET
* APRS Vision System
* APRServe: An Internet Backbone for APRS
* Keypad Interface Language
* An All-Software Advanced HF Modem for Amateur Radio
* Detection and Estimation of Covert DS/SS Signals Using Higher Order
Statistical Processing
* HamWeb: Rethinking Packet Radio
* Wireless in Ulaan Bataar
* Management of TNCs by Means of the Simple Network Management Protocol
* North American Digital Systems Directory (NADSD)
* TCP Header Compression According to Van Jacobson via AX.25
* TCP/IP on FlexNet -- Just Another Layer
* An Amateur 900Mhz Spread-Spectrum Radio Design
* VHF/UHF/Microwave Radio Propagation: A Primer for Digital Experimenters
* Software Radio Technology Overview and Recent Progress
* PerlAPRS: An Automated Control Application for APRS Networks
* Update on Digital Voice Technologies
* Using a PC and a Soundcard for Popular Amateur Digital Modes
* Terminal Node Controllers -- Towards The Next Generation ?
* On-Air Measurements of CLOVER P38 Throughput

Tucson Amateur Packet Radio
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---
e-mail: tapr@tapr.org ftp: ftp.tapr.org   web: <http://www.tapr.org/>
---

4. 97 ARRL and TAPR DCC Update

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 30 Sep 1997 14:57:22 -0500
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03110712b057014e7452@[208.134.134.40]>
Rendered body type: text/plain

16th Annual ARRL and TAPR Digital Communications Conference

1997 ARRL and TAPR Digital Communications Conference
October 10-12, 1997
Baltimore, Maryland (minutes from BWI airport)

Main Web Page -- http://www.tapr.org/dcc
Tentative Schedule -- http://www.tapr.org/tapr/html/dcc97schedule.html
Proceedings Abstracts -- http://www.tapr.org/tapr/html/cnc16.html
Local Attractions -- http://www.tapr.org/tapr/html/dcc97_attractions.html

---

The 1997 ARRL and TAPR Digital Communications Conference will be held on
October 10-12, 1997 in Baltimore, Maryland. This years conference location
is just minutes away from the BWI Airport.

 What can you expect during the 1997 ARRL and TAPR Digital Communications
Conference ?
* A full day of papers and breakouts on Saturday for the beginner to the
advanced amateur digital enthusiast.

* Three workshops
        o Friday (1pm - 8pm) - APRS Symposium
        o Friday (4pm - 8pm) - Seminar on RF Basics for Computer Weenies
        o Sunday (8:30am - 1:30pm) - Seminar on Spread Spectrum system
Design and Theory

* The second annual Student paper session.

* A banquet with a Special Guest Speaker Yutaka Sakurai, JF1LZQ who is Vice President of Japan's Packet Radio User's Group (PRUG). His talk is entitled, "Japan's PRUG: A look at its history and a view to the future". He will discuss the history of the PRUG from its early beginnings in the mid-80's and track its development to today. He will also discuss some of PRUG's current projects and its goals for the future.

* SIGs (Special Interest Groups) on Saturday following the banquet.

* Informal get-togethers throughout the weekend.

* TAPR Membership Meeting

Special Symposiums/Seminars

In addition to the presentation of papers on Saturday, three symposiums/seminars will be held before and after the conference. These sessions are provided to allow those with additional time and interest to make the most of the Digital Communications Conference. For those that might have interest in just a symposium or seminar, registration for the conference is not necessary to register and attend one or more of the symposiums and seminars. This allows maximum flexibility for those that might want to participate during the Digital Communications Conference, but do not have an entire weekend to devote to the event.

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Local Co-Hosts
The 1997 ARRL and TAPR Digital Communications Conference will be co-hosted by AMRAD (Amateur Radio Research and Development Corporation).

The Amateur Radio Research and Development Corporation (AMRAD) is a worldwide club of amateur radio and computer experimenters. The purpose of AMRAD is to develop skills and knowledge in radio and electronic technology, advocate design of experimental equipment and techniques, promote basic and applied research, organize technical forums and symposiums, collect and disseminate technical information, and provide experimental repeaters.

Airports

* The closest airport is Balitmore/Washington International (BWI)
* For those flying internationally or located on the East coast, check flights into
    - o Dulles International or
    - o Washington National Airport

* Bus/rail service from either Dulles or Washington to BWI is available,
but be sure to check on this before arriving.

Hotel Information

Conference presentations, meetings, and workshops will be held at the
Holiday Inn BWI Airport. DCC special rooms rates are $89 per night. When
making reservations with the hotel, be sure to indicate you are attending
the ARRL and TAPR DCC conference. The hotel provides transportation to and
from BWI Airport, Amtrak/MARC rail station, and the local Baltimore Light
Rail. You should contact the hotel to arrange transportation.

     Holiday Inn BWI Airport (conference hotel)
     890 Elkridge Landing Rd, Linthicum, MD, 21090
     (410) 859-8400, Fax (410) 684-6778

     3912.00N and 07641.34W

Directions to Conference

Coming from Baltimore Metro Area:
Follow MD-295 SOUTH towards BWI airport
Take W. NURSERY Rd exit
LEFT at the list at the end of the exit
RIGHT at the 3rd light, WINERSON Rd
LEFT at the 1st light, ELKRIDGE LANDING Rd
Holiday Inn BWI will be 1/2 mile on right.

Coming from Annapolis:
Follow I-97 NORTH/RT. 3 NORTH
Take DORSEY Rd Exit (rt 176 West)
RIGHT onto AVIATION Blvd (Rt 162)
Pass BWI Satellite parking
Follow signs to BWI Airport
RIGHT onto ELKRIDGE LANDING Rd
Holiday Inn BWI will be 1/2 mile on left.

Coming from Washington, DC:
Follow I-95 NORTH or MD-295 NORTH towards Baltimore
Take I-195 EAST towards BWI airport
Take EXIT 1A (Rt. 170 North)
LEFT at 2nd light, ELKRIDGE LANDING Rd
Holiday Inn BWI will be 1/2 mile on left.

Coming from the North:
Follow I-95 SOUTH or NEW JERSEY TURNPIKE SOUTH to I-95 South
Take I-95 SOUTH to I-195 EAST/AIRPORT to
Rt. 170 NORTH LINTHICUM to 2nd light,
turn left onto ELKRIDGE LANDING Rd
Holiday Inn BWI will be 1 mile on left.

Local Repeater Talk-In
Maryland FM Association WA3DZD repeater network has given premission to use
their system for the talk-in on Saturday morning, October 11, 1997 and for
use during the conference weekend. The frequecies are:

   * 146.76 out, 146.16 in
   * 224.76 out, 223.16 in
   * 444.00 out, 449.00 in

The talk-in station will be using the call sign W3NSA.

Many thanks to the Maryland FM Association.

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd

5. 1997 DCC Schedule

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 30 Sep 1997 15:02:13 -0500
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03110715b0570b36c8b3@[208.134.134.40]>
Rendered body type: text/plain

1997 ARRL and TAPR Digital Communications Conference
Oct 10-12, 1997 Baltimore, Maryland

http://www.tapr.org/dcc

Tentative Schedule
(October 1st, 1997)

Friday, October 11th, 1997

```
 8:00am - 3:00pm  TAPR Board Meeting                          Patapsco Room
11:00am - 6:00pm  Registration Area, Hospitality Area Opens   Grissom Room
 3:00pm - 8:00pm  ARRL Future Systems Committee Meeting       Patapsco Room

 1:00pm - 8:00pm  APRS National Symposium                     Chesapeake
                  Steve Dimse, K4HG, Moderator
     1:00 PM  Welcome                              Steve Dimse K4HG
     1:05 PM  Use of APRS in the Atlanta Olympics Ralph Fowler N4NEQ
     1:20 PM  Storm Chasing with APRS              Jim Duncan KU0G
     1:35 PM  APRSdos update                       Bob Bruninga WB4APR
     2:00 PM  Mac/WinAPRS update                   Keith Sproul WU2Z
     2:25 PM  javAPRS/APRServe update              Steve Dimse K4HG
     2:40 PM  New TNC Software                     Gwyn Reedy W1BEL
     3:00 PM  Weather Station update               Bill Peet
     3:20 PM  Garmin update                        Brad Wiseman
     3:40 PM  Break
     4:00 PM  Mic-E update                         Bob Bruninga WB4APR
     4:15 PM  DFjr update                          Mike Musick N0QBF
     4:30 PM  GPS overview                         Tony McConnell N3JLY
     4:45 PM  TrackNet                             Bob Bruninga WB4APR
     5:00 PM  APRS Vision System                   Bob Bruninga WB4APR
     5:15 PM  Stand alone trackers                 Jim Duncan KU0G
     5:35 PM  Internet/javAPRS sites               Steve Dimse K4HG
     5:45 PM  Break
     6:00 PM  APRS Frequency Change                Frank Bauer KA3HDO
     6:20 PM  Digi's/RF networking                 Ralph Fowler N4NEQ
     6:40 PM  Map Making                           Arte Booten N2ZRC
     6:55 PM  Map Making                           Keith Sproul WU2Z
     7:05 PM  Public Service Events                Jim Duncan KU0G
     7:25 PM  DFing                                Mike Musick N0QBF
     7:45 PM  Future features of WinAPRS           Mark Sproul KB2ICI

 4:00pm - 8:00pm  Seminar on                                  Annapolis
                  RF Basics for Computer Weenies
                  Mike Cheponis, K3MC
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Saturday, October 12th, 1997 (**), (***)

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 7:15am - 9:00am  Foyer Registration
 9:00am - 5:00pm  TAPR and ARRL, Registration after 9am       Grissom Room
 9:00am -10:00pm  Hospitality Area Opens                      Grissom Room
```

Conference Sessions

```
 8:00am           Conference Opening/Welcome                  Chesapeake
                   * Greg Jones (President TAPR)
                   * Paul Rinaldo (AMRAD)

 8:20am -10:00am  Session 1a (Saturday Morning)
           8:20am - 8:40am
                Software Radio Technology Overview and Recent
                Progress (p. 130)
                Joseph Mitola, III (jmitola@mitre.org)
           8:40am - 9:00am
                Wireless in Ulaan Bataar (p. 51)
                Dewayne Hendricks, WA8DZP (dewayne@warpspeed.com)
           9:00am - 9:20am
                Terminal Node Controllers -- Towards the Next
                Generation ? (p. 156)
                Darryl Smith, VK2TDS (vk2tds@ozemail.com.au)
```

9:20am - 9:40am
Management of TNCs by Means of the Simple
Network Management Protocol (p. 57)
H. Hmida, VA2HLH, and M. Barbeau, VE2BPM
(hmida@dmi.ushreb.ca / barbeau@dmi.ushreb.ca)
9:40am - 10:00am
Update on Digital Voice Technologies (p. 149)
Paul L. Rinaldo, W4RI (w4ri@arrl.org)

8:20am - 8:50am Session 1b (Saturday Morning) Annapolis
8:20am - 8:50am
Introduction to Digital Communications
TBD
9:00am - 9:50am
What is GPS ? How does it work ? and why do I care ?
Tom Clark, W3IWI (w3iwi@amsat.org)

10:30am -12noon Session 2a (Saturday Morning) Chesapeake
10:30am - 10:50am
TAPR Status Report on Spread Spectrum
Activity in the Amateur Radio Service (p. 83)
Greg Jones, WD5IVD and Dewayne Hendricks,
WA8DZP (dewayne@warpspeed.com)
http://www.tapr.org/ss
10:50am - 11:20am
An Amateur 900Mhz Spread-Spectrum Radio Design (p. 99)
Tom McDermott, N5EG, Bob Stricklin, N5BRG,
and Bill Reed, WD0ETZ (n5eg@tapr.org /
n5brg@amsat.org / wd0etz@tapr.org)
http://www.tapr.org/ss
11:20am - 11:40am
(STUDENT AWARD)
Detection and Estimation of Covert DS/SS
Signals Using Higher Order Statistical
Processing (p. 36)
Mamdouh Gouda, Ernest R. Adams, and Peter
C.J. Hill (gouda@rmcs.cranfield.ac.uk)
11:40am - 12:00noon
(STUDENT AWARD)
An All-Software Advanced HF Modem for Amateur Radio (p. 32)
Matthew Ettus, N2MJI (mne@cmu.edu)
http://www.andrew.cmu.edu/user/mne

10:00am -12noon Session 2b (Saturday Morning) Annapolis
10:00am - 10:50am
Introduction to APRS
Bob Bruninga, WB4APR, Mark Sproul, KB2ICI,
Keith Sproul, WU2Z
11:00am - 11:50am
Introduction to Amateur Digital Satellites
TBD

12noon - 1:30pm Lunch Harbor

1:30pm - 3:05pm Session 3a (Saturday Afternoon) Chesapeake
1:30pm - 1:45pm
North American Digital Systems Directory
(NADSD) (p. 68)
Greg Jones, WD5IVD, and Carl Estey, WA0CQG
(http://www.tapr.org/directory)
1:45pm - 2:05pm
An AMSAT Mobile TRAKNET (p. 16)
Bob Bruninga, WB4APR (wb4apr@amsat.org)
2:05pm - 2:25pm
APRServe: An Internet Backbone for APRS (p. 24)
Steve Dimse, K4HG (k4hg@tapr.org)
http://www.aprs.net/k4hg.html
2:25pm - 2:45pm
APRS Vision System (p. 19)
Bob Bruninga, WB4APR (wb4apr@amsat.org)
2:45pm - 3:05pm
Amateur Radio on Manned Space Vehicles:
Improving Amateur Radio's Future Through
Enhanced Space Frequencies (p. 11)

Frank H. Bauer, KA3HDO (ka3hdo@amsat.org)

1:30pm - 3:45pm Session 3b (Saturday Afternoon) Annapolis

1:30pm - 1:50pm
TBD
TBD

2:00pm - 2:45pm
Introduction to Spread Spectrum Communications
Paul Rinaldo, W4RI (w4ri@arrl.org)

3:00pm - 3:45pm
VHF/UHF/Microwave Radio Propagation: A Primer
for Digital Experimenters
Barry McLarnon, VE3JF (ve3jf@tapr.org)

3:30pm - 5:00pm Session 4 (Saturday Afternoon) Chesapeake

3:30pm - 3:50pm
HamWeb: Rethinking Packet Radio (p. 41)
John Hansen, WA0PTV (wa0ptv@tapr.org)
http://www.tapr.org/~wa0ptv

3:50pm - 4:10pm
TAPR TAC-2 Project Update
Tom Clark, W3IWI and Rick Hambly, WB2TNL
(w3iwi@tapr.org)
http://www.tapr.org/tapr/html/tac2.html

4:10pm - 4:25pm
Timewave Technology Inc.
Randy Gawtry K0CBH (rgawtry@timewave.com)

4:25pm - 5:00pm
Additional Updates
TBD

6:00pm - 8:00pm Dinner
Prize Drawing
Banquet Speaker: Yutaka Sakurai, JF1LZQ
Vice President of Japan's Packet Radio User's
Group (PRUG). His talk is entitled, "Japan's PRUG:
A look at its history and a view to the future".

Limited Space for Dinner, Banquet Talk is open to all

8:30pm - TAPR Membership Meeting Chesapeake

8:30pm - Informal Discussions Harbor/Annapolis

Sunday, October 13th, 1997

8:00am - 9:00am Foyer Workshop Registration

9:00am - 2:00pm TAPR and ARRL Tables Grissom
Registration after 9am for Workshops

9:00am - 5:00pm Hospitality Area Opens Grissom

8:30am - 1:30pm Seminar: Spread Spectrum System Chesapeake
Design and Theory.
Dewayne Hendricks, WA8DZP, Phil Karn, KA9Q,
and Tom McDermott, N5EG

---

* Speaker has not yet confirmed their attendance

** Times inside each session approximate.
Each session will begin on time.
Time will be available after each presenation for limited questions
from the audience depending on the amount of time used by
the presenter.

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd

October 1997

Original source file: tapr-bb.9710
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1997-10/TAPR-BB_1997-10.txt

1. GPS30PC Group Purchase Update

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Wed, 1 Oct 1997 13:30:03 -0500
To: " tacgps "<tacgps@tapr.org>, "APRS SIG  list   mailing"<aprssig@tapr.org>,
        " MIC-E Beta "<mic-e@tapr.org>,
        "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03110730b05845d4c09d@[208.134.134.40]>
Rendered body type: text/plain
```

Hello everyone, a brief update on the GPS30PC group purchase.

We are expecting the units to arrive from Garmin end of this week and will
begin to ship the 250 ordered units out starting soon after.

Support for the GPS30PC will be done using the TACGPS list.

See everyone at the DCC in 10 days or so!
http://www.tapr.org/dcc

Cheers - Greg Jones, WD5IVD

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd

2. Next Weekend's TAPR/ARRL Digital Conference

```
From: Greg Jones <wd5ivd@tapr.org>
Date: Sat, 4 Oct 1997 14:19:57 -0500
To: "TAPR   APRS SIG"<aprssig@tapr.org>,
        "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03110702b05c472a212c@[208.134.134.40]>
Rendered body type: text/plain
```

>From Tom Clark W3IWI off of the TACGPS List --------

Greg (WD5IVD) has posted a lot of information on next weekend's
Digital conference. If you've missed it, everything you want to
know is on the TAPR web site at URL

     http://www.tapr.org

For those of you who are coming, I thought I might recommend a couple
of other "tekkie" attractions close to the conference site.

(1) The National Security Agency (NSA) has established the National
Cryptological Museum (NCM) which is really amazing. The give a lot of
history on cryptology in peace and war, and even show some of the
NSA current activities. They have the hardware from several
generations of the Moscow/Washington "Red Phone" hotline. They
show a number of versions of the German Enigma, Japanese Purple,
and British/USA Bombe machines.

For me the most fascinating attraction is that they have a working
German Enigma that you can try (with, unfortunately, a few burned-out
light bulbs).

To reach the NCM, note on your map that the Balto/Wash Parkway is
adjacent to the site of the conference. Proceed south on the BWP
to Maryland Rt.32 and turn east (marked Fort Meade -- NOT towards
Columbia). About 500 feet east of the BWP, turn left (north) onto a
road marked "Colony 7 Drive" and follow it to the museum. [FYI,
Colony 7 used to be a motel. NSA got squeemish over having a motel
so close to their sacred turf so they bought it, and then turned it
into a museum].

The NCM hours are
  - weekdays: 09:00 - 15:00
  - Saturday: 10:00 - 14:00
  - Sunday: closed

For anybody interested in digital communications, the NCM is a MUST!

(2) Further south, just off the BWP, is NASA Goddard Space Flight Center. GSFC has a nice Visitor's Center that has real leftover satellites, descriptive material about NASA and GSFC's missions, and even a real moon rock.

The easiest way to reach the GSFC Visitor's Center from the DCC site is to proceed south on the BWP. After the Rt.32 exit mentioned above, you will pass thru Md.198 and Md.197 exits (warning!! Construction delays possible) and the next exit will be Powder Mill Rd. Take this exit and at the end of the ramp turn left (east) onto Powder Mill. About 500 feet up this road, turn right(south) onto Soil Conservation Road and proceed ~2 miles. Just before the 1st traffic light (which runs only during workdays) you will see the GSFC's club station, WA3NAN on your left -- if the gate is open, stop in and say hello. Another few hundred feet down the road is a 2nd traffic light -- turn right, and then immediately turn left before you come to the guard shack -- this will take you directly to the GSFC visitor's center.

Hours: Tuesday - Sunday: 10:00 - 16:00

Hope you find these added attractions interesting -- 73, Tom

3. AMRAD meeting Thur of DCC

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 7 Oct 1997 09:59:17 -0500
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>, " tacgps "<tacgps@tapr.org>,
" Spread Spectrum "<ss@tapr.org>,
"NETSIG list mailing"<netsig@tapr.org>,
"HF SIG list mailing"<hfsig@tapr.org>
Message-ID: <v03110708b05ffe1db177@[208.134.134.40]>
Rendered body type: text/plain

Participants in the 1997 Digital Communications Conference are invited to attend the regular monthly meeting of the Amateur Radio Research and Development club (AMRAD), Thursday evening at 7:30 PM in the lower meeting room of the Dolley Madison Branch Libary, McLean, Virginia. The library is located near the intersection of VA Rte 123 (Dolley Madison Blvd) and Old Dominion Drive.

This month's meeting is devoted to the "dc" band of anywhere from 73 kHz to 190 kHz. ARRL has stated an amateur requirement for access to a low-frequency band and NTIA has accepted the justification. There are still many steps needed to acquire the band but interest is building among experimenters. American LF advocates are watching activities in Europe where CEPT is planning a "harmonised" band around 143 kHz.

Bob Laney will be one of the (informal) speakers for this Thursdays meeting. He has a wonderful LF set-up and is even a fan of amateur seismology. He'll be bringing photos and share his experiences in the LF arena.

4. Twelfth Annual Southwest Ohio Digital Symposium

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 23 Oct 1997 10:15:28 -0500
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Cc: " TAPR SYS "<tapr-sys@tapr.org>
Message-ID: <v03110706b0751a6c8eb9@[208.134.134.40]>
Rendered body type: text/plain

CALL FOR PAPERS

Twelfth Annual Southwest Ohio Digital Symposium
Saturday January 17, 1998
9:00 a.m. - 4:00 p.m.

http://w3.one.net/~rkuns/swohdigi.html

Thesken Hall, Middletown Campus,
Miami University, Middletown, OH

Sponsored by The Center for Continuing Education,
Miami University, Middletown,
DIAL Radio Club, and The Ohio Packet Council

This is the formal call for papers, for the Twelfth Annual SWOH Digital

Symposium If you have an interest in CW, RTTY, Packet Radio, AMTOR, etc., and would like to discuss some aspect of the hobby/service with your fellow hams, please forward a title, abstract (100 words or less) and a brief description of your qualifications to: Hank Greeb, N8XX N8XX@W8MWO.OH.USA or 72277.706@Compuserve.com

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Background:

The South West Ohio Digital Symposium has been held each year since 1987, for the purpose of promoting digital modes of communications via Amateur Radio. The primary, but not exclusive, thrust is packet radio and networking, but we try to present other modes including CW, RTTY, coherent CW, et. cetera. (semaphore and smoke signals were discussed during one session.)

Sponsoring organizations are The Center for Continuing Education of Miami University, the DIAL Radio Club, and the Ohio Packet Council.

The symposium is non profit, we make no money - we try to break even.

Comments and suggestions are welcome.

Directions to Thesken Hall:

Arriving via I-75:

Exit at SR #122 (exit #32) and travel West toward Middletown. The first traffic light will be at the entrance to the Towne Mall Shopping Center. After passing the second traffic light, move into the right-hand lane. SR #122 will veer left; you proceed straight ahead, continuing on GRAND AVENUE. The 3rd light will be Marshall Road, the 4th light will be Elliot Drive and the 5th light will be BREIEL BOULEVARD where you should turn right (North). As you make your turn at Breiel & Grand Avenue, you will see the Middletown Shopping Center on the right.

Continue on Breiel to the 6th traffic light, this is the entrance to Miami University. Come down the drive; parking on your left and buildings on your right. The second building is Thesken Hall. You may unload in fron of the building but DO NOT park there or in the handicapped area unless you have appropriate authorization.

Middletown's repeaters operate on 146.61, 224.96, and 444.825 using standard offsets.

Arriving, from Hamilton, via SR #4:

Follow SR #4 (North) into Middletown to the second traffic light, turning right (East) onto FOURTEENTH AVENUE. Follow 14th Avenue until it runs dead. >From the right-hand lane, turn left (North) into the right-hand lane of UNIVERSITY BOULEVARD.

University Blvd. will, very soon, veer left and ROOSEVELT BOULEVARD will veer right; follow Roosevelt to the right.

Proceed East, on Roosevelt Blvd., to the 7th traffic light, turning left (North) onto BREIEL BOULEVARD.

Continue on Breiel to the 8th traffic light, this is the entrance to Miami University. Come down the drive; parking on your left and buildings on your right. The second building is Thesken Hall. You may unload in front of the building but DO NOT park there or in the handicapped area unless you have appropriate authorization.

Middletown's repeaters operate on 146.61, 224.96, and 444.825 using standard offsets.

Greg Jones, WD5IVD
Austin, Texas
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http://www.tapr.org/~wd5ivd

November 1997

Original source file: tapr-bb.9711
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1997-11/TAPR-BB_1997-11.txt

1. Status of GPS30PC Purchase

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 10 Nov 1997 00:27:54 -0600
To: "APRS SIG  list   mailing"<aprssig@tapr.org>, " tacgps "<tacgps@tapr.org>,
        "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Cc: Dorothy Jones <tapr@tapr.org>
Message-ID: <v03110707b08c5840b00c@[208.134.134.40]>
Rendered body type: text/plain
```

TAPR was able to get another 50 GPS30PC's from Garmin after we closed the purchase to handle the people that where calling wanting an extra unit here or there. This was on top of the 50 we ordered above the group purchase number.

So ---- Dorothy has reported that we have an extra 20 or so GPS30PC left over for various reasons.

If you want a GPS30PC as part of the $99 group purchase call Dorothy starting Tuesday (940) 383-0000 with Credit information handy.

For details can be found on http://www.tapr.org

I expect these to go fast!

Cheers - Greg

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd

2. 1997 ARRL and TAPR DCC Concluding Comments

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Wed, 12 Nov 1997 17:53:53 -0600
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03110736b08ff1ab70ba@[208.134.134.40]>
Rendered body type: text/plain
```

ARRL and TAPR 1997 Digital Communications Conference

See:

Main DCC Page	http://www.tapr.org/dcc/
All Audio Segments	http://www.tapr.org/tapr/html/dcc97audio.html
Photos from Conf	http://www.tapr.org/tapr/html/dcc97photo.html
DCC Conf Story	http://www.tapr.org/tapr/html/dcc97story.html
DCC Proceedings Abstracts	http://www.tapr.org/tapr/html/cnc16.html
Past DCC Pages	http://www.tapr.org/tapr/html/pastdccconf.html

The Digital Communications Conference was held on October 10-12, just outside Baltimore, MD at the BWI airport. The total attendance count for the conference was over 170 people. This was another nice increase from the previous year. It seemed that the conference was well-rounded in technical content and user-featured topics. A big thanks to AMRAD who co-hosted the conference.

Friday, October 10th, 1997

The conference began on Friday with the opening of the hospitality suite, even though the TAPR Board and ARRL Future Systems Committee had already had meetings that day.

The big event on Friday was the APRS Symposium, coordinated by Steve Dimse, K4HG. Anyone who was anyone in APRS seemed to be in attendance, which made for an active and long day of presentations. Over 80 people attended the special national symposium. We hope that this symposium will be held in the coming years and come to represent the APRS developmental community. The following people presented during the symposium: Steve Dimse, K4HG, Ralph Fowler, N4NEQ, Bob Bruninga, WB4APR, Keith Sproul, WU2Z, Gwyn Reedy, W1BEL, Bill Peet(Peet Bros), Brad Wiseman (Garmin), Mike Musick, N0QBF, Tony

McConnell, N3JLY, Frank Bauer, KA3HDO, Arte Booten, N2ZRC, Mark Sproul KB2ICI, and a few others. Thanks to all those who presented and attended.

Also on Friday, Mike Cheponis, K3MC, hosted a seminar entitled "RF Basics for Computer Weenies". The seminar had over 20 people in attendance and the four hour seminar covered a whole lot of different RF related topics. Some of the things covered during the seminar included: Path Loss Considerations, Propagation mechanisms, Ground Reflection (2-ray) Model, Path Loss Models, Considerations for Mobile Stations, Relationship between Bandwidth and Received Power, Path measurement Techniques, Antennas and Feedline at 900Mhz and up, Basic Test Equipment, and more. Like I said, Mike covered a lot of stuff in-depth in a little over 4 hours.

Saturday, October 11th, 1997

Saturday morning the conference got an early start at a little past 8:00am when Greg Jones, WD5IVD (President TAPR), and Jon Bloom, KE3Z (ARRL) welcomed the conference attendees and kicked off the conference.

If you couldn't attend the conference, TAPR is making all the main paper session presentations available on their web site (www.tapr.org) under the Virtual Conference page. The Introductory topic sessions were recorded as well and will also be available for listening to. In addition to the audio, a full page of images from the conference is available for browsing. TAPR would like to thank all the people who did special introductory sessions during the conference. We asked presenters if they would take the extra time to do an in-depth presentation on a topic and they all did a great job. These people include: Jim Neely, WA5LHS (Intro to Digital Communications), Tom Clark, W3IWI (What is GPS? How does it work? and why do I care?), Robert Diersing, N5AHD (Intro to Digital Satellite Operations), Bob Bruninga, WB4APR, Mark Sproul, KB2ICI, and Keith Sproul, WU2Z (Intro to APRS), John Ackermann, N8UR (ex-AG9V) (Intro to Amateur Radio TCP/IP), Paul Rinaldo, W4RI (Intro to Spread Spectrum), and Barry McLarnon, VE3JF (VHF/UHF/Microwave Radio Propagation: A Primer for Digital Experimenters).

At 8:20am the main paper sessions and the introductory sessions began. The first presentation was Wireless in Ulaan Bataar by Dewayne Hendricks, WA8DZP. Dewayne talked about his experiences installing RF in Mongolia. Next was HamWeb: Rethinking Packet Radio by John Hansen, WA0PTV. John detailed his work regarding the transfer of the UoSAT broadcast protocol to terrestrial usage. John later set up his equipment in the hall and gave a live demo. All his software is available from his TAPR web page http://www.tapr.org/~wa0ptv. H. Hmida of Canada next presented Management of TNCs by Means of the Simple Network Management Protocol, in which his group of authors had developed an SNMP interface for controlling TNCs. Darryl Smith, VK2TDS, making the conference all the way from Australia, discussed Terminal Node Controllers -- Towards the Next Generation ? Darryl presented information that had been collected regarding potential future paths in TNC development. The first paper session concluded with an Update on Digital Voice Technologies by Paul L. Rinaldo, W4RI.

After the break, the next paper session began at 10:30am with the presentation by Greg Jones and Dewayne Hendricks entitled TAPR Status Report on Spread Spectrum Activity in the Amateur Radio Service. Dewayne detailed the current status of the STA and FCC rule making regarding SS. Next Tom McDermott, N5EG and Bob Stricklin, N5BRG presented the TAPR 900Mhz Spread-Spectrum Radio Design. The 30 min session hit the high points, since a more detailed 2 hour presentation was set for the Sunday SS seminar. Lots of questions and lots of answers during the presentation. The second paper session concluded with the two Student Paper Awards, funded again this year by the ARRL Foundation. The DCC committee would like to thank the ARRL Foundation for sponsoring the awards this second year. This year the Student Awards committee decided to fund two Technical Paper awards. Both papers were very good. The first student paper was by Mamdouh Gouda, who had flown in from Cranfield University, England, entitled "Detection and Estimation of Covert DS/SS Signals Using Higher Order Statistical Processing" This was a very technical method in locating DSSS signals without knowing their P/N sequence. This theory could be used in the future to actually call CQ and have someone find you without them knowing your P/N sequence. The second paper was by Matthew Ettus, N2MJI, of Carnegie Mellon University, entitled "An All-Software Advanced HF Modem for Amateur Radio." A very good talk on software HF modems.

After these papers, the conference broke for lunch and the awards for the student papers were given. The Student Awards committee is made up of Gerald Knezek, KB5EWV, Robert Diersing, N5AHD, and Greg Jones, WD5IVD. Gerald and Robert will continue as co-chairs for the 1998 awards to be given at next year's DCC. Full details on the 1998 Student Paper Awards are already

available on the TAPR web site, under the DCC link. If you have students, give this a look for next year!

After lunch, the third paper session began with a presentation on the North American Digital Systems Directory (NADSD) by Greg Jones, WD5IVD. Greg described the NADSD, its formation, it operations, and activity seen since January. You can visit the NADSD at http://www.tapr.org/directory. Following Greg was Bob Bruninga, WB4APR, talking about the potential of AMSAT Mobile TRAKNET. The use of 1200baud LEO satellites for national and international location finding. Steve Dimse, K4HG, then discussed the APRServe: An Internet Backbone for APRS. Steve has been working on this project for a little over a year now and much was reported on the current status and future of the system. Bob Bruninga, WB4APR, then presented a paper on the APRS Vision System. Bob showed off his "APRS Rover" and talked about a very interesting way to transmit pictures with very low overhead. The session was concluded by Frank H. Bauer, KA3HDO, presenting his paper on Amateur Radio on Manned Space Vehicles: Improving Amateur Radio's Future Through Enhanced Space Frequencies. Frank talked about the issues with manned space frequencies for amateur radio usage and again proposed the APRS QSY.

The last paper session of the conference began with Tom Clark, W3IWI, and Rick Hambly, WB2TNL, discussing the TAPR TAC-2 Project. Tom, the designer of the TAC-2, talked about design issues and real world usage. Also, information on the next element of the project -- TOC -- was discussed. Rick discussed his Windows based TAC-2 software. Randy Gawtry, K0CBH, of Timewave Technology, Inc. then concluded the day with a talk about what Timewave was doing and how the acquisition of AEA was happening with product reintroductions. The group broke for the day and got ready for dinner.

Dinner was held at 6pm. After dinner, several Plaques were awarded. A plaque was given to Keith Sproul, WU2Z, which read "TAPR Proudly Recognizes Keith Sproul, WU2Z, for outstanding service to TAPR as founder of the TAPR APRS Special Interest Group in 1994 and dedicated volunteer." Then an award was given to the local hosts of the conference. "ARRL and TAPR are pleased to recognize AMRAD for their participation as local co-host for the 1997 ARRL and TAPR Digital Communications Conference".

After the plaques were presented, Special Guest Speaker Yutaka Sakurai, JF1LZQ who is Vice President of Japan's Packet Radio User's Group (PRUG) gave a presentation entitled, "Japan's PRUG: A look at its history and a view to the future". He discussed the history of the PRUG from its early beginnings in the mid-80's and tracked its development to today. He also discussed some of PRUG's current projects and its goals for the future. It was a very interesting talk hearing about packet radio in Japan and seeing some of the projects they are doing. The entire presentation was sent back to Japan to their CUSeeMe server so their members and family in Japan could watch and listen. Great talk! After dinner, the TAPR membership meeting was held.

Sunday, October 12th, 1998

The Spread Spectrum Design and Theory Seminar started Sunday morning early. Coordinated by Dewayne Hendricks, WA8DZP, the seminar saw Phil Karn, KA9Q, Tom McDermott, N5EG, and Dewayne present for over five hours on Spread Spectrum Theory, Design, and Regulatory issues. The seminar was attended by over 80 people. It would be hard to describe all the information that was presented. Next best thing would be to listen to the entire seminar and download the overheads used. Phil Karn, KA9Q, discussed issues regarding coding and other SS theory that is important to cover. Tom McDermott, N5EG, then followed with an in-depth technical discussion using the TAPR 900Mhz FHSS radio project as the focus on the design constraints. Dewayne then followed with an impassioned talk regarding regulatory environment and the future of amateur radio and how SS and increased experimentation fits into all this.

Concluding Comments

The ARRL and TAPR Joint Conference Committee is now looking at sites for next year. The group has a proposal from Ohio, Kansas City and Chicago to host next year's conference. There should be details as to next year's location by the first of 1998. Look for the ARRL and TAPR DCC in the Central US and to be held around September 25-27, 1998! Until next year!

Proceedings

Not everything published in the proceedings got presented at the conference. The proceedings are now available from both ARRL and TAPR for $15.00. Full abstracts are available on the TAPR web page (www.tapr.org). In addition, TAPR now has the complete set of proceedings available if you are missing any past issues.

Reprinted from PSR November, 1997.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 940-383-0000
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e-mail: tapr@tapr.org ftp: ftp.tapr.org web: <http://www.tapr.org/>
---

3. FCC ISSUES RF SAFETY SUPPLEMENT B TO OET BULLETIN 65

From: Greg Jones <wd5ivd@tapr.org>
Date: Sun, 23 Nov 1997 12:20:10 -0600
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v03110704b09e240913c3@[208.134.134.40]>
Rendered body type: text/plain

FCC ISSUES RF SAFETY SUPPLEMENT B TO OET BULLETIN 65

Hams now have basic guidelines and tools to evaluate their stations for compliance with the FCC's RF exposure guidelines that start phasing in January 1, 1998. The FCC's Office of Engineering and Technology issued the long-anticipated Amateur Radio Supplement B to its OET Bulletin 65 on November 18. The FCC worked closely with the Amateur Radio community to develop the new supplement. Several ARRL Headquarters staff members and Technical Advisors reviewed preliminary drafts of the supplement. ARRL Lab Supervisor Ed Hare, W1RFI, has been the League's point man for RF safety and exposure issues.

"It has been my pleasure to work with the FCC staff and the amateur community in finalizing Supplement B," Hare said. "All who have been part of this process deserve the thanks of the entire amateur community."

Supplement B, entitled Additional Information for Amateur Radio Stations, contains detailed information specific to ham radio stations. It is designed to be used in conjunction with the FCC's OET Bulletin 65 (Version 97-01), Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields. The revised Bulletin 65 was issued earlier this year. Supplement B covers definitions of RF radiation and discusses the FCC exposure guidelines and their applications, methods of predicting human exposure, estimating compliance distances, and controlling exposure to RF fields. The supplement runs approximately 70 pages. Among its noteworthy highlights are numerous easy-to-use tables based on various frequencies, power levels and antenna configurations to help hams determine whether their stations comply with the FCC's published RF exposure guidelines. Most tables show compliance distance--the distance that an antenna needs to be located from areas of exposure to be in compliance. (For a closer look, see "FCC RF-Exposure Regulations--the Station Evaluation," by Ed Hare, W1RFI, which will appear in the January issue of QST.)

The new RF exposure rules go into effect January 1, 1998 for all new stations and for those filing a Form 610 with the FCC after that date. Existing stations have until September 1, 2000 to comply with the new rules. But, existing stations making changes that could affect RF exposure from their station--such as increasing power or relocating antennas--must evaluate that change if done after January 1, 1998.

As first announced, the FCC set a power threshold of 50 W to trigger the need to do a station evaluation. In late August, the FCC revised the power level thresholds to trigger a routine Amateur Radio station RF exposure evaluation. Those changes were welcome news for most hams. The newest guidelines raised its original 50-W PEP threshold on all bands except 10 meters through 2 meters, where it remains at 50 W PEP. The FCC went along in part with an ARRL request and established a sliding scale for threshold levels dependent upon frequency. The revised thresholds (all PEP) are 500 W for 160 through 40 meters, 425 W on 30 meters (the maximum legal power is 200 W), 225 W on 20 meters, 125 W on 17 meters, 100 W on 15 meters, 75 W on 12 meters and 50 W on 10 meters. The threshold for all VHF bands is 50 W. On UHF, the threshold level is 70 W on 70 cm, 150 W on 33 cm, 200 W on 23 cm,

and 250 W on 13 cm and higher frequencies.

The threshold for amateur repeaters is 500 W effective radiated power (ERP) if the repeater antenna is located on a building or is less than 10 meters above ground. Stations operating at or below these respective power levels are categorically excluded from having to conduct a routine RF radiation evaluation. Mobile and portable (hand-held) devices using push-to-talk operation generally are also exempt from evaluation. But, all stations--regardless of power level--still must comply with the RF exposure limits that become effective New Year's Day.

OET Bulletin 65 and the new Supplement B are available at http://www.fcc.gov/oet/info/documents/bulletins/#65. Copies are available from International Transcription Service Inc, 1231 20th St NW, Washington, DC 20036; tel 202-857-3800; fax 202-857-3805.

Source: The ARRL Letter
Vol. 16, No. 46
November 21, 1997

4. NADSD End of Year

From: Greg Jones <wd5ivd@tapr.org>
Date: Sun, 30 Nov 1997 01:59:51 -0600
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v03110704b0a6cd4dee75@[208.134.134.40]>
Rendered body type: text/plain

TAPR North American Digital System Directory

It seems just yesterday that TAPR's North American Digital System Directory (NADSD) was merely in the idea stage. That was in November of 1996 - and a year later that idea has been transformed into reality. Thanks to a core group of TAPR volunteers - and to over sixty contributors of data - over 4,200 listings covering 42 States and 8 Provinces are available free-of-charge on the TAPR web page (http://www.tapr.org/directory). The project has become an astounding success!

It is to you - contributors of data to the NADSD - that we say THANKS! You have made the idea become reality!

As we look forward to 1998, the NADSD team has two objectives and one major project in mind. First, the objectives:

We need to review our individual listings and make sure that they are still accurate and complete. Many of us wanted to get the initial data into the system last year so we submitted only the minimum required data. The need now is to get all of the data for each entry. Please take the time to review your data and add missing fields like LAT/LON, network type and system type. These fields are important so that the mapping features created by Steve Dimse, K4HG, can work. (If you haven't experienced Steve's neat mapping features, give the NADSD maps a try!)

This has also been a year of many changes. BBS's have left the air, some have been added, nodes have been added and some have gone off-the-air. The NADSD needs to capture all of these changes if it is to remain accurate.

Second, we need to expand our listings. We have 42 States represented - some with only a small number of listings. We need to add to our listings to include more systems in our areas - and more States. Please encourage other keepers of lists about digital communication systems to become data providers for the NADSD.

Our major project coming up in January, is the publication of the NADSD in the 1998 TAPR CD-ROM. We want to make sure that the NADSD is really up-to-date so that everyone who buys the TAPR CD-ROM gets to see our project at it's very best!

In summary, please take the time to review and up-date your submissions to the NADSD. Use the normal FTP process to send your updates. Just a reminder - if you use a different file name than you did when you last submitted data, be sure to delete the OLD data file. The deadline for submitting your data to make it into the 1998 CD-ROM is December 31, 1997.

Thanks for your help in making this a great beginning for the North American Digital System Directory.!

73,
Carl - WA0CQG

TAPR North American Digital System Directory team focal point
WA0CQG@TAPR.ORG

P.S. There was a paper published and presented in October at the ARRL and
TAPR DCC regarding the NADSD. Give it a listen and a print.
http://www.tapr.org/directory/info.html

December 1997

Original source file: tapr-bb.9712
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1997-12/TAPR-BB_1997-12.txt

1. Office Hours Update

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 11 Dec 1997 04:48:48 -0600
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03130314b0b574cc1980@[208.134.134.40]>
Rendered body type: text/plain
```

As normal for the holidays.

The TAPR office will partially close from Dec 15th through January 10th.
This means that Dorothy will not be answering the phone during the break.
You can still leave messages, send e-mail, and place faxes -- and the
office will still be shipping stuff out, but at a reduced rate.

With the current level of activity at the office, it is impossible to
totally shutdown for the holidays anymore, but we try to let Dorothy take a
break from being in the office all the time.

Cheers - Greg Jones, WD5IVD

Happy Holidays from TAPR

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd

2. TPRS 97 Digital Symposium audio available

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 11 Dec 1997 04:56:48 -0600
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03130315b0b57740ad1f@[208.134.134.40]>
Rendered body type: text/plain
```

Texas Packet Radio Society (TPRS) held its Fall Digital Symposium on
Dec 6th in Austin, Texas. We recorded all the audio and it can be
found at http://www.tapr.org/tapr/html/tprs97.html

The following people presented during the day

* Antennas, feedlines, propagation for 915 Mhz
    Bob Morgan, WB5AOH

* TAPR 900Mhz FHSS Radio Design
    Tom McDermott, N5EG

* TAPR FHSS Radio Design Status Update
    Bob Stricklin, N5BRG

* Update on Spread Spectrum Rulemaking and other projects
    Greg Jones, WD5IVD

* Texnet Update and TexNet Software update
    Bob Morgan, WB5AOH

I have included overheads as available on the web page in pdf format.

Had several of the planned presentations cancelled at the last minute,
because of various work conflicts with the invited speakers. Happens.
Made for a slightly abbreviated meeting.

Was a very fun Saturday and hope more can attend next year for the 7th
annual meeting.

Cheers - Greg, WD5IVD

P.S. Be sure to check out our other virtual meetings available in audio
format at http://www.tapr.org/tapr/html/virtual.html

```
------------------------------------------------------------------------------
Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399 * 940-383-0000
------------------------------------------------------------------------------
e-mail: tapr@tapr.org  ftp: ftp.tapr.org   web: <http://www.tapr.org/>
------------------------------------------------------------------------------
```

3. Update on TAPR GPS Items

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 15 Dec 1997 03:02:17 -0600
To: "TAPR   APRS SIG"<aprssig@tapr.org>, " tacgps "<tacgps@tapr.org>,
        "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v0313032ab0ba9e37c041@[208.134.134.40]>
Rendered body type: text/plain
```

The TAPR GPS Page has been updated to include the Garmin GPS-25 OEM board.
http://www.tapr.org/gps/

The GPS-25 is $20 more expensive then the GPS-20, but it is a true 12 channel parallel sensor. Several of you have contacted the office about when we would have these -- they are available now for ordering. As with the GPS-20, we will be placing orders the first of each month. We will continue to offer the GPS-20 as long as Garmin makes them available for those that want the multitrack unit.

We will be adding the Garmin GA27 antenna to the items offered in the next few weeks.

Also, keep an eye out for an inexpensive solution for DGPS. Something that a lot of you have been asking for over the last year. When a kit or possible semi-kit is available, it should be very popular! TAPR will post something when official.

On a last note regarding the GPS30PC offer -- out of the some 400+ units made available to members, we had 5 failed units returned. Special thanks to Brad Wiseman and GARMIN for allowing TAPR to make these units available to the amateur radio community. Dorothy reported that we had about 15 GPS30PCs left that have either been orders that were cancelled or not purchased after sending e-mail.

Best wishes on this upcoming holidays.

Cheers -- Greg

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd

4. Nominations Sought for TAPR Board of Directors

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 25 Dec 1997 18:17:14 -0600
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>,
        "HF SIG  list   mailing"<hfsig@tapr.org>,
        " Spread Spectrum "<ss@tapr.org>, " TAPR/AMSAT DSP "<dsp@tapr.org>,
        "APRS SIG  list   mailing"<aprssig@tapr.org>,
        "NETSIG  list   mailing"<netsig@tapr.org>,
        "BBS SIG  list   mailing"<bbssig@tapr.org>,
        " tacgps "<tacgps@tapr.org>, " MIC-E Beta "<mic-e@tapr.org>
Message-ID: <v03130309b0c8a625a448@[206.138.226.73]>
Rendered body type: text/plain
```

Nominations Sought for TAPR Board of Directors
(as printed in 1997 PSR #68, p. 34)

Tucson Amateur Packet Radio is incorporated in the State of Arizona as a non-profit scientific and educational institution. It is recognized by the IRS as a 501(c)3 tax-exempt organization for these same purposes. TAPR is governed by a 9-member Board of Directors. Each member of the Board serves a three year term. Every year three positions are up for election.

Board members are expected to attend two board meetings held in conjunction with the Dayton Hamvention and the ARRL and TAPR Digital Communications Conference. They participate in the decision-making process and provide guidance to the officers. They receive no pay and must defray most of their own expenses to attend meetings. Board members should be prepared to be active in the continuing Board deliberations, which are conducted via

the Internet. Active participation in TAPR activities by Board members is important to the furtherance of the objectives of TAPR. The officers of TAPR are elected by the members of the Board at the annual Board of Directors meeting.

The current members of the Board of Directors and their expiration dates of their terms are:

*	John Ackermann, AG9V	1998	Vice President
*	Jim Neely, WA5LHS	1998	Treasurer
*	Barry McLarnon, VE3JF	1998	
	Steve Bible, N7HPR	1999	
	Gary Hauge, N4CHV	1999	
	Bob Hansen, N2GDE	1999	PSR Editor
	Greg Jones, WD5IVD	2000	President
	John Koster, W9DDD	2000	
	Mel Whitten, K0PFX	2000	

Nominations are now open for seats expiring in March 1998 (marked with an asterisk).

To place a person in nomination, please remember that he or she must be a member of TAPR. Confirm that the individual is willing to have their name placed in nomination. Send that person's name (or your own if you wish to nominate yourself) along with your call and their call, telephone numbers, mailing address, and Internet address. The person nominated should submit a short biographical sketch to be published along with the ballot.

Nominations and biographical sketches should be submitted to the TAPR office no later than December 31st, 1997.

Ballots will be mailed with the next PSR. TAPR will again use an Internet ballot, so read your ballot carefully. Results will be announced on March 30th, 1998.

Responsibilities of a board member include:
1) Attendance at both board meetings each year.
2) Regular participation with the continuous session of the board (currently held over the Internet). Typically this requires a minimum of 3 hours a week, although sometimes much more is required during active board discussions.
3) Participation with TAPR projects as volunteered. Board members, while not required, are involved with various project management, ongoing organization and/or supervision/liaison positions. Active board participation with various projects make many of the most important projects and tasks possible. Board members are expected to take an active part in TAPR in some form.

All nominated members will be placed on the ballot and the highest vote receivers will be placed in the open board positions. If elected, two board meetings in 1998 will be held. One will be during Dayton Hamvention and the other during the ARRL and TAPR Digital Communications Conference. All directors shall serve for a term of three years.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
e-mail: tapr@tapr.org web: <http://www.tapr.org/>
ftp: ftp.tapr.org
phone: 940-383-0000 fax: 940-565-2544

January 1998

Original source file: tapr-bb.9801
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1998-01/TAPR-BB_1998-01.txt

1. AX.25 version 2.2 pdf updated

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Wed, 7 Jan 1998 05:31:11 -0600
To: " tapr-tnc "<tapr-tnc@tapr.org>,
        "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03130316b0d917493615@[208.134.134.40]>
Rendered body type: text/plain
```

We finally got the information from Adobe on why some of the pages where
not being generated correctly in pdf format from Pagemaker.

So, the AX.25 version 2.2 file (http://www.tapr.org/tapr/pdf/AX25.2.2.pdf)
now shows all the graphics and diagrams. This link is available at
http://www.tapr.org/tapr/html/ax25.html

For those who downloaded the previous version, you will want to download
the corrected version.

Cheers - Greg

Greg Jones, WD5IVD
Austin, Texas
wd5ivd@tapr.org
http://www.tapr.org/~wd5ivd

Any sufficiently advanced technology is indistinguishable from
a rigged demo.

2. TAPR TACGPS List

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sat, 17 Jan 1998 23:59:15 -0600
To: " AMSAT BB Mail Group "<amsat-bb@amsat.org>,
        "TAPR-BB  list   mailing"<tapr-bb@tapr.org>,
        "APRS SIG  list   mailing"<aprssig@tapr.org>, aprsnews@tapr.org
Message-ID: <v0313035eb0e7489b8632@[208.134.134.40]>
Rendered body type: text/plain
```

The TAPR TAC-2 and GPS list somehow decided to zap its subscribers list
several days ago. If you were on the TACGPS list, you'll need to subscribe
to the list again.

This can be done on our web page (http://www.tapr.org/tapr/html/sigs.html)
or send an e-mail to listserv@tapr.org and in the body of the message put
'subscribe tacgps'

Sorry for the bandwidth. We didn't have a better way to try to contact the
large group of people following the list that was lost.

If you know someone that was following the latest development on the TAC-2
and various GPS research, please tell them about this glitch.

Cheers - Greg

```
------------------------------------------------------------------------
Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
------------------------------------------------------------------------
e-mail: tapr@tapr.org       web: <http://www.tapr.org/>
ftp:    ftp.tapr.org
phone:  940-383-0000        fax: 940-565-2544
------------------------------------------------------------------------
```

3. ANNOUNCEMENT: APRS NEWS Special Interest Group

```
From: Greg Jones <wd5ivd@tapr.org>
Date: Wed, 21 Jan 1998 19:07:40 -0600
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v03130336b0ec4bc3ba11@[208.134.134.40]>
```

Rendered body type: text/plain

>From Stan Horzepa, WA1LOU, TAPR APRS SIG Chair.

To more easily obtain information about new APRS software and firmware releases, as well as, announcements about APRS conferences and forums, TAPR has set up a new e-mail listserv called APRS NEWS . The APRS NEWS is not a discussion group (the APRS SIG and APRS QSY SIG serve that function); rather, it is intended as a place for software and firmware authors to post announcements concerning the release of their latest APRS wares, and as a place for
organizers to post announcements concerning APRS conferences and forums.

For those individuals that had requested a list that contained just APRS related announcements, this is were you should be.

The APRS NEWS is moderated, that is, the moderator approves all announcements before they are posted on the SIG. The moderator of the APRS NEWS list is Stan Horzepa, WA1LOU.

To subscribe to the APRS NEWS, surf to the bottom of:

   http://www.tapr.org/tapr/html/sigs.html

or send email to:

   listserv@tapr.org

with the following line in the body of the message:

   subscribe aprsnews YourFirstName YourLastName

February 1998

Original source file: tapr-bb.9802
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1998-02/TAPR-BB_1998-02.txt

1. TAPR Mail Archives Search Engine Fixed

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 3 Feb 1998 00:30:05 -0600
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>, aprsnews@tapr.org,
        "TAPR   APRS SIG"<aprssig@tapr.org>
Message-ID: <v03130302b0fc65da815c@[208.134.134.40]>
Rendered body type: text/plain
```

Several people reported problems with the TAPR Mail Archives in the last few weeks. This problem has been corrected and now the largest mail archives are again searchable. The mail archives are updated on the first of each month to include the previous months messages.

Thanks to those for pointing out the problem.

In addition, the HTML version of the archives has been updated to include all 1997 postings. We should be updating these pages quarterly.

The web page for the mail archives is:
http://www.tapr.org/tapr/html/taprmailsearch.html

Cheers - Greg, WD5IVD
TAPR

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
e-mail: tapr@tapr.org   web: <http://www.tapr.org/>
ftp: ftp.tapr.org
phone: 940-383-0000   fax: 940-565-2544

---

2. MIC-E, GPS Antennas, & NOS Intro Update

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 22 Feb 1998 21:49:58 -0600
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>,
        "TAPR   APRS SIG"<aprssig@tapr.org>
Message-ID: <v0313030bb1169c973024@[207.43.172.66]>
Rendered body type: text/plain
```

The latest shipment of MIC-Es arrived from Florida Friday. If you have a MIC-E on order, it will be shipping out this week (although a few shipped out Friday). We should have about 75 units in stock after the back orders are taken care of.

On another GPS related note, TAPR is now carrying both the Garmin GA-27 antenna (suction cup and mag mount) and the Motorola Antenna-97 (mag mount). Thanks to Garmin and Syngery Systems for this offering. We are working on the web pages now, so they are not available on the web pages yet...only through the office. The Garmin GA-27 is $75 and has a MCX connector and the Motorola Antenna 97 is $65 with a BNC connector.

Also, we just received a new shipment of NOS Intro books from Ian in England. So -- we have them in stock now.

Don't forget TAPR members get 10% off on kits and publications!

Just call the office (940) 383-0000 or e-mail taprf@tapr.org or use our on-line order page http://www.tapr.org/tapr/html/order.html

Cheers - Greg, WD5IVD

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   ICQ: 8651948
http://www.tapr.org/~wd5ivd

Experience is what you get when you were expecting something else.

March 1998

Original source file: tapr-bb.9803
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1998-03/TAPR-BB_1998-03.txt

1. TAPR Election Ballot Daedline

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 2 Mar 1998 13:57:46 -0600
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v03130302b120bf6ccb78@[207.43.172.66]>
Rendered body type: text/plain

Typo in the first section of the recently mailed PSR regarding the TAPR election. The deadline for ballots is March 15th as printed on the last page.

Sorry about this.

Don't forget you can ballot by the web. See your PSR.

Cheers - Greg Jones, WD5IVD
President

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
---
e-mail: tapr@tapr.org web: <http://www.tapr.org/>
ftp: ftp.tapr.org
phone: 940-383-0000 fax: 940-565-2544
---

2. APRS School Exp via MIR

From: Greg Jones <wd5ivd@tapr.org>
Date: Thu, 5 Mar 1998 12:54:48 -0600
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v0313033ab124a5369525@[207.43.172.66]>
Rendered body type: text/plain

Date: 3/5/98 11:05 AM
Received: 3/5/98 12:50 PM
From: Dr. Larsen, doc@volcano.net
To: 'sarex@amsat.org', sarex@AMSAT.org

The Mirex (Mir International Amateur Radio Experiment) team would like to announce an Automatic Packet/Positioning Reporting System (APRS) test. ON March 10th 1998 beginning at 1455 UTC and ending at 1651 UTC, APRS stations WILL be allowed to use the Digital Repeater [R0MIR] on the Russian Mir Packet Station.. This 2 hour experiment will cover approximately 99% of the USA on these 2 orbits of Mir [make sure you have updated Keps]

MIREX would hope that Schools would be informed about the upcoming experiment and be able to log into one of the APRS WEB sites (WWW.APRS.NET) to track APRS beaconing stations all across the USA. Or if hams could set this up with schools to bring in there laptops and put up a Vertical antennas system to copy the APRS data from the MIR packet system.

This Experiment has been a LONG time in the planning and I hope it will serve as a step for other Experiments With this hobby

Mir PMS Frequency:

145.985 FM Simplex.
Mir Digital Repeater Call sign R0MIR

After March 10th @ 1651UTC APRS should NOT be used via MIR .

Mir
1 16609U 86017A 98063.08565753 .00008828 00000-0 10311-3 0 3011
2 16609 51.6575 217.9855 0005337 84.5056 275.6535 15.62474297687614

Dr Dave Larsen

MIREX Presdent
MIR QSL Mgr
N6CO

doc@volcano.net

April 1998

Original source file: tapr-bb.9804
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1998-04/TAPR-BB_1998-04.txt

1. TAPR Dayton '98 Activities

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 6 Apr 1998 22:23:45 -0500
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v04003a00b14f4b2d3af3@[207.8.125.50]>
Rendered body type: text/plain
```

Dayton 1998 TAPR Digital Forum and PACK*BASH

Dayton Hamvention will be here before we know it. Some interesting changes this year, though. Last year, we got moved to another fourm location and this year that location got reassigned to vendors. Thus, we got moved back, but our time block is drastically reduced and the forum starts much earlier than in years past. For the amount of time we have, we have packed as much as we can and still maintain enough time to cover and discuss the materials. As in years past, the PacketBASH banquet will be held on Friday night.

We are going to try to make the audio available live from the event this year. Last year this was curtailed when the server crashed and died just before the forum. It is our hope to show off a different Spread Spectrum connection between the TAPR Digital Forum and the TAPR booth on Friday to allow presenters to use the Internet or present their overheads off the server in the booth or even from their home sites! We will just have to wait and see as the event unfolds. Be sure to drop by any of the events and say hello!

If you haven't been to Dayton before, you should think about coming this year. The dates for this year are May 15th - 17th. Check out the web page http://www.tapr.org/tapr/html/dayton.html for any last minute changes in the schedule. The schedule of events will appear later in the PSR, but things do sometimes change at the last minute.

The schedule for the TAPR digital forum is:

```
10:00 - 10:05   Introduction
                        John Ackermann, N8UR
10:05 - 10:30   TAPR Kit/Project/Organizational Update
                        Greg Jones, WD5IVD
10:30 - 10:45   Regulatory Issues
                        Dewayne Hendricks, WA8DZP
10:45 - 11:30   Spread Spectrum
                        Tom McDermott, N5EG/Bob Stricklin, N5BRG
11:30 - 12:00   GPS Projects
                        Steve Bible, N7HPR/Tom Clark, W3IWI
12;00 - 12:15   BREAK
12:15 - 12:45   Linux AX.25
                        John Ackermann, N8UR
12:45 - 13:45   APRS Stuff
                        Bob Bruninga, WB4APR, etc
```

PACK*BASH and TAPR Banquet

Attending the 1998 Dayton Hamvention? Then don't miss out on PACK*BASH and TAPR Banquet.

What?

An event for the digitally-inclined ham, featuring:

* Buffet dinner
* Keynote address by (TBA)
* TAPR special interest group meetings
* "Birds of a Feather" gatherings

When?

Friday evening, May 15, 1998
Doors open at 7:00 pm; dinner served at 7:30 pm
Speaker and meetings after dinner

Where?

NCR "Sugarcamp" Conference Center, 101 W. Schantz Ave. --
South of downtown Dayton, just west of Main St. (Rt 48).
Maps available on the TAPR web site or at the TAPR booth.
(http://www.tapr.org/tapr/html/dayton.html)

How?

Dinner requires advance registration and payment through TAPR.
Tickets will be available at the TAPR booth on Friday, though
we strongly encourage registration <before> Hamvention. The cost
is $20.00 per person, tax and tip included.

All amateurs are welcome to attend, enjoy the speaker, and
participate in the meetings, although only those purchasing a
dinner can eat.

To register, contact:

PACK*BASH
c/o TAPR
8987-309 E. Tanque Verde Road #337
Tucson, AZ 85749-9399

Phone: (940) 383-0000
Fax: (940) 566-2544
Internet: tapr@tapr.org

Visa/Mastercard Accepted

Who?

PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet
Radio, the national leader in digital communication -- and the
Miami Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to
http://www.tapr.org/tapr/html/dayton.html, or send e-mail to
tapr@tapr.org. You can request information via packet radio at
BASH@N8ACV.#DAY.OH.USA.NOAM.

May 1998

Original source file: tapr-bb.9805
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1998-05/TAPR-BB_1998-05.txt

1. Dayton 1998 TAPR Digital Forum and Pack*Bash

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sat, 2 May 1998 10:54:51 -0500
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v04003a03b170f0ca828f@[207.8.125.50]>
Rendered body type: text/plain
```

Dayton 1998 TAPR Digital Forum and PACK*BASH

Dayton Hamvention will be here later this month. Just as a reminder, the
TAPR Digital Forum is on Friday and this year starts much earlier than in
years past. In addition, the PacketBASH banquet will be held on Friday
night.

If you haven't been to Dayton before, you should think about coming this
year. The dates for this year are May 15th - 17th. Check out the web page
http://www.tapr.org/tapr/html/dayton.html for any last minute changes in
the schedule.

The schedule for the TAPR digital forum on Friday is:

10:00 - 10:05am (5 min)
        Introduction to Forum
        John Ackermann, N8UR

10:05 - 10:25am (20 min)
        TAPR Kit/Project/Organizational Update - Greg Jones , WD5IVD
        TAPR Update and discussion on current activities.

10:25 - 10:45am (20 min)
        Regulatory Issues - Dewayne Hendricks, WA8DZP
        Update on Regulatory Issues related to Digital activity.

10:45 - 11:30am (45 min)
        TAPR 900Mhz FHSS Radio Project
        Tom McDermott, N5EG / Greg Jones, WD5IVD
        Latest Information on Status and design of 900Mhz FHSS Radio Design.

11:30 - 12:15pm (45 min)
        GPS Projects - Steve Bible, N7HPR / Tom Clark, W3IWI
        TAPR has introduced several GPS related items in the last year.
        DGPS, GPS Interface boards, TAC-2, Future TOC add-on, etc

12:15 - 12:30pm (15 min)
        Break

12:30 - 1:00pm (30 min)
        Linux AX.25 - John Ackermann, N8UR
        Making AX.25 play on Linux

1:00pm - 1:45pm (60 min)
        APRS SIG and APRS Update
        Stan Horzepa, WA1LOU, APRS SIG Chair with the APRS Authors
        SIG meeting discussing current and future activities in APRS.

PACK*BASH and TAPR Banquet

Attending the 1998 Dayton Hamvention? Then don't miss out on PACK*BASH and
TAPR Banquet.

What?
        An event for the digitally-inclined ham, featuring:
                * Buffet dinner
                * Speaker Doug McKinney, KC3RL
                      discussing GPS and his Bouy projects in the Pacific
                * TAPR special interest group meetings
                * Prize Drawing!

When?
        Friday evening, May 15, 1998
        Doors open at 7:00 pm; dinner served at 7:30 pm
        Speaker and meetings after dinner

Where?
        NCR "Sugarcamp" Conference Center, 101 W. Schantz Ave. --
        South of downtown Dayton, just west of Main St. (Rt 48).
        Maps available on the TAPR web site or at the TAPR booth.
        (http://www.tapr.org/tapr/html/dayton.html)

How?
        Dinner requires advance registration and payment through TAPR.
        Tickets will be available at the TAPR booth on Friday, though
        we strongly encourage registration <before> Hamvention. The cost
        is $20.00 per person, tax and tip included.

        All amateurs are welcome to attend, enjoy the speaker, and
        participate in the meetings, although only those purchasing a
        dinner can eat.

        To register, contact:
                PACK*BASH
                c/o TAPR
                8987-309 E. Tanque Verde Road #337
                Tucson, AZ   85749-9399

                Phone: (940) 383-0000
                Fax: (940) 566-2544
                Internet: tapr@tapr.org

                Visa/Mastercard Accepted

Who?
        PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet
        Radio, the national leader in digital communication -- and the
        Miami Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to
http://www.tapr.org/tapr/html/dayton.html, or send e-mail to
tapr@tapr.org. You can request information via packet radio at
BASH@N8ACV.#DAY.OH.USA.NOAM.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
----
e-mail: tapr@tapr.org   web: <http://www.tapr.org/>
ftp: ftp.tapr.org
phone: 940-383-0000   fax: 940-565-2544
----

2. TAPR Office, Delays...

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Fri, 29 May 1998 15:39:54 -0500
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v04003a05b194cd3515d2@[207.8.125.50]>
Rendered body type: text/plain

Dorothy has been a little under the weather the last week and with the
normal huge backlog of being at Dayton, expect some delay in getting back
to e-mail and faxes sent to the office.

Hopefully Dorothy will be felling 100% in the next few days as the medicine
kicks in.

Cheers - Greg

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

Real World, The n.:

5. Anywhere outside a university. "Poor fellow, he's left UT Austin and gone into the real world."

3. ARLB039 Sen Barry Goldwater, K7UGA, SK

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Fri, 29 May 1998 16:39:47 -0500
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v04003a0ab194db917682@[207.8.125.50]>
Rendered body type: text/plain

Subject: ARLB039 Sen Barry Goldwater, K7UGA, SK

SB QST @ ARL $ARLB039
ARLB039 Sen Barry Goldwater, K7UGA, SK

ZCZC AG39
QST de W1AW
ARRL Bulletin 39 ARLB039
>From ARRL Headquarters
Newington CT May 29, 1998
To all radio amateurs

SB QST ARL ARLB039
ARLB039 Sen Barry Goldwater, K7UGA, SK

Former US Senator, onetime presidential candidate, and noted radio amateur Barry Goldwater, K7UGA, died May 29. He was 89. Goldwater had suffered a stroke in 1986 and had been in failing health.

A staunch conservative, Goldwater was the 1964 Republican presidential nominee and served five terms in the US Senate. He also authored the book Conscience of a Conservative. Goldwater retired from politics in 1986. His home was in Scottsdale, Arizona.

As a Senator, Goldwater's legacy included several pieces of Amateur Radio-related legislation. In 1964, Goldwater's bill to allow reciprocal operating agreements between the US and other countries was signed into law. It was his work on the bill that prompted the Arizona Senator to renew his interest in ham radio after a long absence.

Goldwater's 1964 presidential campaign tried to tap into his ham radio connections with a ''Hams for Barry'' fundraising effort. He took time out of the campaign to address the ARRL National Convention in New York City, on the occasion of the League's 50th anniversary. In his remarks, Goldwater reminisced about his youthful foray into Amateur Radio as 6BPI. He was first licensed in 1921, and joined the ARRL in 1923. ''You can't imagine what a relaxation ham radio is for me,'' the campaign-weary Goldwater told the gathering. He related how, during the GOP Convention earlier that summer, he'd made several hundred contacts from his hotel room using a borrowed Collins S-line. The convention presented Goldwater with a certificate of appreciation for his work on behalf of the hobby (see QST, Oct 1964, p 80). Goldwater lost the 1964 election to Lyndon Johnson.

While serving as chairman of the Senate Communications Subcommittee in 1981, Goldwater introduced landmark legislation proposing several changes to the Communications Act affecting amateurs. In 1982, Congress finally approved and President Reagan signed what came to be known as the Goldwater Amateur Radio legislation, enacted as Public Law 97-259. The measure established the Amateur Auxiliary and the volunteer examination programs, permitted 10-year license terms, and exempted Amateur Radio from the secrecy provisions in the Communications Act. The Goldwater bill also ended years of Congressional wrangling and authorized the FCC to set RFI susceptibility standards for home electronic devices.

A year later, President Reagan signed into law a bill including a Goldwater amendment that allowed the recovery of costs in the Volunteer Examiner program (the FCC didn't authorize the plan until months later, however).

At one point in his ham radio career, Goldwater operated as K3UIG from his Senate office and as K7UGA when he was home in Arizona. He called his Arizona ham shack ''bash-hal-ne-ae,'' which he said was Navajo for ''music from iron'' or ''metal that talks.''

Goldwater was a life member of the ARRL. He was elected president
of the Quarter Century Wireless Association in 1971. A pilot during
World War II, he held the rank of General in the Air Force Reserve
and was an active member of Air Force MARS. During the Vietnam War
era, Goldwater handled hundreds of thousands of phone patches. He
also held a pilot's license and occasionally operated aeronautical
mobile.

In 1983, Amateur Radio paid homage to Goldwater as ''its
governmental protector and advocate'' by establishing the $5000 ARRL
Scholarship to Honor Barry Goldwater, K7UGA. In announcing the
scholarship, then-ARRL Washington Area Coordinator Perry Williams,
W1UED, said that Goldwater's Amateur Radio involvement had ''brought
joy to thousands of members of the armed services stationed
overseas, and through his professional career, he has exemplified
the principles of commitment and service to one's country and fellow
citizens.''

Then-FCC Chairman Mark Fowler said the Amateur Radio community was
lucky to have Goldwater as its ''elder statesman'' in government and
noted that the FCC often had Goldwater review ham-related proposals
before it took action on them.

The Goldwater scholarship, administered by the ARRL Foundation, is
awarded each year to a deserving radio amateur to encourage a spirit
of achievement and dedication in the field of communication.

ARRL Executive Director David Sumner, K1ZZ, said that of amateurs in
the public sector, Goldwater was ''without peer.'' Southwestern
Division Director Fried Heyn called Goldwater ''a super ham'' who was
''concerned about the future of Amateur Radio.''

Goldwater's first wife, Peggy, died in 1986. The couple's two sons
and two daughters and Goldwater's second wife, Susan, are among his
survivors.
NNNN
/EX

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

Real World, The n.:
        5. Anywhere outside a university. "Poor fellow, he's left UT
Austin and gone into the real world."

4. TAPR Office Closure

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sat, 30 May 1998 13:42:11 -0500
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>,
        "NETSIG list   mailing"<netsig@tapr.org>,
        "APRS SIG list   mailing"<aprssig@tapr.org>,
        "HF SIG list   mailing"<hfsig@tapr.org>,
        " Spread Spectrum "<ss@tapr.org>,
        "BBS SIG list   mailing"<bbssig@tapr.org>,
        " tacgps "<tacgps@tapr.org>
Message-ID: <v04003a09b19601d3362e@[207.8.125.50]>
Rendered body type: text/plain

The TAPR office will be closed for at least two weeks beginning Monday.

Dorothy Jones, KA5DWR, Office Manager underwent surgery this morning and
will be in the hospital the rest of this week recovering. Good news is
that the surgery went well and we are waiting for Dorothy now to get out of
post-op.

E-Mails, Faxes, and Calls to the office will still be accepted, but expect
delays in getting kits and publications shipped until things get back to
normal at the Jone's household. I'll be heading to Denton to help at the
office while Dorothy is recovering, but things will be slowed down until
Dorothy is feeling better.

You can send flowers or greetings to:
        Denton Community Hospital
        207 North Bonnie Brae
        Denton TX 76201
        Telephone: 940 898-7000
        Room 139, Dorothy T Jones

I will be taking e-mail up to her if you want to send something by e-mail.

Greg Jones, WD5IVD
Pres. TAPR

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

Real World, The n.:
  5. Anywhere outside a university. "Poor fellow, he's left UT
Austin and gone into the real world."

5. Result of new message to ham-radio [5/30/98 23:27:24]

From: wclistserve@fanciful.org (Wclistserve)
Date: Sun, 31 May 1998 06:27:24 GMT
To: tapr-bb@tapr.org
Message-ID: <896596044@fanciful.org>
Rendered body type: text/plain

Not a member of ham-radio

Resent-from: "Tom Lebens" <tom.lebens@fanciful.org>
Resent-to: ham-radio@fanciful.org
Resent-date: Sat, 30 May 1998 23:24:08 -0800
Received: from tapr.org (localhost [127.0.0.1]) by tapr.org (8.7.5/8.7.3/1.9) with SMTP id QAA00257;
Fri, 29 May 1998 16:51:13 -0500 (CDT)
Date: Fri, 29 May 1998 16:51:13 -0500 (CDT)
Message-Id: <v04003a0ab194db917682@[207.8.125.50]>
Reply-To: tapr-bb@tapr.org
Originator: tapr-bb@tapr.org
Sender: tapr-bb@tapr.org
Precedence: bulk
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
To: tapr-bb@tapr.org
Subject: [TAPR-BB:407] ARLB039 Sen Barry Goldwater, K7UGA, SK
X-Listprocessor-Version: 6.0 -- ListProcessor by Anastasios Kotsikonas
X-Comment: Tucson Amateur Packet Radio Announcements

Subject: ARLB039 Sen Barry Goldwater, K7UGA, SK

SB QST @ ARL $ARLB039
ARLB039 Sen Barry Goldwater, K7UGA, SK

ZCZC AG39
QST de W1AW
ARRL Bulletin 39 ARLB039
>From ARRL Headquarters
Newington CT May 29, 1998
To all radio amateurs

SB QST ARL ARLB039
ARLB039 Sen Barry Goldw

6. 1998 ARRL and TAPR Digital Communications Conference

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 31 May 1998 14:09:17 -0500
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v04003a00b1975b3a381e@[207.8.125.50]>
Rendered body type: text/plain

1998 ARRL and TAPR Digital Communications Conference
September 25-27, 1998
Chicago, Illinois (minutes from O'Hare Airport)

Web: http://www.tapr.org/dcc

It's that time again! Mark your calendar and think about what to publish
for the upcoming 17th Annual ARRL and TAPR Digital Communications
Conference. This is the third year in which the ARRL Digital
Communications Conference and TAPR Annual General Meeting are joined into
one conference!

The ARRL and TAPR Digital Communications Conference is an international

forum for radio amateurs in digital communications, networking, and related technologies, who meet, publish their work, and present new ideas and techniques for discussion. Presenters and attendees have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. The Digital Communications Conference is not just for the digital expert, but for digitally-oriented amateurs at all levels of expertise.

The 1998 ARRL and TAPR Digital Communications Conference will be held September 25-27, 1998, in Chicago, Illinois. This year's conference location is the Holiday Inn Rolling Meadows, just minutes from O'Hare Airport.

Not only is the Digital Communications Conference technically stimulating, it is a weekend of fun for all who have more than a casual interest in any of the ham digital communications modes. This includes APRS operators, digital networks, software writers, modem designers, and digital satellite enthusiasts. The ARRL and TAPR Digital Communications Conference is for all levels of digital operators -- a must conference to attend to become active on a national level. Now, more than ever, amateur radio needs this great meeting of the minds because it is important that we demonstrate a continued need for the frequency allocations we have by pushing forward and documenting our achievements. The ARRL and TAPR Digital Communications Conference is one of the few ways to record our accomplishments and challenge each other to do more.

A Conference for the Beginner, Too

The conference is not just for the digital expert. This year's conference again provides multiple session tracks for beginning, intermediate, and advanced presentations on selected topics in digital communications. Topics will include APRS, satellite communications, TCP/IP, digital radio, Spread Spectrum, and many others. Come to the conference and hear these topics presented by the experts! Don't miss this opportunity to listen and talk to others in these areas.

Symposia and Seminars

In addition to the presentation of papers on Saturday, three symposia/seminars will be held. These sessions are provided to allow those with additional time and interest to make the most of the Digital Communications Conference. For those who may have interest in just one symposium or seminar, registration for the conference is not required to attend these activities. This allows maximum flexibility for those who may want to participate during the Digital Communications Conference, but do not have an entire weekend to devote to the event.

The Second APRS National Symposium will be held on Friday and will be moderated by Steve Dimse, K4HG (the developer of javAPRS). It will likely include many APRS software authors, such as Bob Bruninga, WB4APR (the father of APRS), Keith Sproul, WU2Z, Mark Sproul, KB2ICI (the developers of MacAPRS and WinAPRS), Brent Hildebrand, KH2Z (the developer of APRSPLUS), and other nationally-known APRS leaders. Join this group for the afternoon and evening for in-depth discussions and presentations on the current and future status of APRS. This is a unique opportunity to gain insight into this fast-growing digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning System).

Starting late Friday afternoon, a half-day seminar titled "Infrastructureless Technologies in Amateur Radio," presented by Don Lemke, WB9MJN, will cover the pros and cons of DDMA (directivity division multiple access, a proposed infrastructureless technigue) versus hubbed (cellular style) and other infrastructure dependant techniques, the basic problem of megabaud rate communications into the ham QTH, and some techniques for channel-area acquisition including full duplex/asynchronous versus simplex/synchronous radio/acquisition concepts. This seminar will start late enough on Friday afternoon to allow those flying that day to attend the seminar.

The Sunday morning seminar will be a combination of two different talks that will make one excellent seminar. The first presentation, by Lyle Johnson, WA7GXD, will focus on the upcoming RUDAK digital communications system scheduled to fly on the AMSAT Phase 3D satellite in the near future. Lyle will discuss features, systems design, integration, and experiments. The goal of the presentation is to zero in on the communications

capabilities of RUDAK, the performance to be expected from the 153k6 PSK system, the limitations and capacities of the DSP modems, user requirements for receiving RUDAK, requirements for transmitting to RUDAK, and how amateurs can work to make ground operations a reality once the satellite is in operation. Information on how to submit a proposal for experimental time on RUDAK will be presented. The second presentation will be by Tim Shepard, KD1KY, regarding "Packet Radio Networks with Millions or Billions of Stations." This talk will present concepts and materials that make you think about different possibilities of networking in the future. Both Lyle's and Tim's presentations focus on different aspects of future digital communications possibilities.

Third Annual ARRL and TAPR DCC Student Papers Award

ARRL and TAPR especially welcome papers from full-time students to compete for the third annual student papers award. Two $500 travel awards may be given, one in each of the following categories: a) best technical/theory-oriented paper by a student, and b) best educational or community-oriented application paper by a student. The paper should relate directly to a wireless digital communication topic (see the guidelines for more information). Papers co-authored by educators or telecommunications professionals are also eligible for this award as long as a student is the first author. The deadline for receipt of finished student paper manuscript is June 20, 1998. Please note that this deadline is different from the general conference paper submission date. For full details and paper guidelines contact TAPR or browse to http://www.tapr.org/dcc.

Call for Conference Proceeding Papers

Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the conference is not required for publication. The primary purpose of the conference is to communicate ideas and techniques regarding digital communications. Papers written in an informal style are welcome, as well as those written to academic standards. If you know of someone who is doing great things with digital communications, be sure to tell them about this! Papers are due by August 15, 1998, and should be submitted to Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111, or via e-mail to lweinberg@arrl.org. The paper submission guidelines are available on-line (http://www.tapr.org/dcc).

Local/International Co-Host

The 1998 ARRL and TAPR Digital Communications Conference will be co-hosted by Chicago Amateur Packet Radio Association (CAPRA). CAPRA is one of the oldest packet radio groups in the US. It focuses on education about amateur packet radio, coordination of joint efforts of hams interested in packet radio, and technical and equipment support for a sound packet network in the Chicago area. They have had high-speed packet networks operational since the mid-1980s. Visit the CAPRA Web site at http://www.imaxx.net/capra for more information.

PRUG (Packet Radio User Group of Japan) will be the first International co-host of the ARRL and TAPR Digital Communications Conference. The conference is proud to welcome PRUG as part of the conference. PRUG will be hosting an informal social Friday evening after the seminar and symposium are completed. Visit http://www.prug.or.jp for more information about the organization.

What can you expect during the 1998 ARRL and TAPR Digital Communications Conference?

* A full day of papers, breakout sessions, and selected topics on Saturday for the beginner to advanced amateur digital enthusiast.

* Three seminars/symposia
  Friday (1 PM)
    - Second Annual APRS National Symposium,
      moderated by Steve Dimse, K4HG

  Friday (3 PM)

- Infrastructure Technologies in Amateur Radio
    conducted by Don Lemke, WB9MJN

Sunday (8:30 AM)
- RUDAK Future Operations and Experimentations
    by Lyle Johnson, WA7GXD
- Packet Radio Networks with Millions or Billions of Stations
    by Tim Shepard, KD1KY

* Third Annual Student Paper Awards.

* TAPR Membership Meeting

* A banquet with special guest speaker Steve Roberts, N4RVE, of Nomadic Research Labs. Creator of the Winnebiko and Behemoth high-tech recumbent bicycles. His current project is focused on Microship technology (http://www.microship.com/).

* SIGs (Special Interest Groups) get-togethers on Saturday, following the banquet

* Informal get-togethers throughout the weekend

* A facility that is perfect for this type of conference

* Informal engineering discussions/demonstration areas

* Motorola Museum located in the area.

* An event at which the most important new developments in amateur digital communications are announced

* Digital 'movers and shakers' from all over the world in attendance

---

Conclusion

If you have attended a Digital Communications Conference in the past, remember how much fun it was discussing the latest developments into the wee hours! If you have never been to a Digital Communications Conference, then make your plans now to attend and find out how much fun they can be.

There are few activities where your participation can be so much fun and so important! You will be able to get together with colleagues from all over the world and bring each other up to date on your latest work. Experience all this and more for an unforgettable weekend of ham radio and digital communications. Make your travel and lodging arrangements now. We hope to see you at the ARRL and TAPR Digital Communications Conference, September 25-27!

Full information on the conference and hotel information can be obtained by contacting Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road #337, Tucson, AZ 85749-9399, phone 940-383-0000, fax 940-566-2544, e-mail tapr@tapr.org, browse www.tapr.org/dcc.

Sincerely,

Steve Ford, WB8IMY, ARRL Conference Co-Chair
Greg Jones, WD5IVD, TAPR Conference Co-Chair
Steve Stroh, N8GNJ, Conference Manager
Mark J. Thompson, WB9QZB, Local Host Liaison
Carl Bergstedt, K9VXW, Local Host Liaison

Note: If you need conference handouts or flyers for ham club meetings, contact TAPR to get what you need!

Hotel Information

Conference presentations, meetings, and seminars will be held at the Holiday Inn Rolling Meadows. Special DCC rooms rates are $85 per night. When making reservations with the hotel, be sure to indicate you are attending the ARRL and TAPR DCC in order to get the discount. It is highly recommended that you book your room prior to arriving. A block of 75 rooms is reserved until August 31, 1998. After the 75 rooms are booked, rooms will only be available in nearby hotels, so be sure to book your rooms early! The hotel provides transportation to and from O'Hare Airport. Please contact the hotel to arrange specific transportation needs.

Holiday Inn Rolling Meadows (conference hotel)
3405 Algonquin Rd
Rolling Meadows, IL 60008
Phone 847-259-5000, fax 847-259-0597

Registration

Contact the TAPR office by phone, fax, or e-mail (numbers and addresses are above) to register or for additional meeting information. MasterCard and VISA are accepted.

- Preregistration (before Sept 1): $42.00 *

- Late registration or at door: $47.00 *

* - Conference registration includes Conference Proceedings, Saturday sessions/meetings, and lunch.

- Saturday Evening Dinner (limited space): $20.00 **

** - Includes dinner, speaker, prize drawing

Seminar/symposia

Note: You do not have to be registered for the conference to attend one or more of the seminars/symposia.

- Friday, 1-8 PM, Second Annual APRS National Symposium (full day)

Registration: $25***

- Friday 3-7 PM, Infrastructure Technologies in Amateur Radio, conducted by Don Lemke, WB9MJN

Registration: $15***

Sunday 8:30-11 AM and 11:30 AM-2 PM, RUDAK Future Operations and Experimentations by Lyle Johnson, WA7GXD, and Packet Radio Networks with Millions or Billions of Stations by Tim Shepard, KD1KY

Registration $20***

*** Cost of seminar or symposium includes the cost of handout materials.

Contact TAPR to register for the DCC:

Tucson Amateur Packet Radio
8987-309 E. Tanque Verde Road #337
Tucson, AZ 85749-9399.
phone 940-383-0000, fax 940-566-2544
e-mail tapr@tapr.org, browse http://www.tapr.org

7. New Audio Pages Available

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 31 May 1998 23:05:08 -0500
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Cc: " TAPR SYS "<tapr-sys@tapr.org>
Message-ID: <v04003a02b197d88f224d@[207.8.125.50]>
Rendered body type: text/plain

1998 TAPR Digital Forum and Banquet Talks (Dayton Hamvention)
http://www.tapr.org/tapr/html/dayton98.html

Couldn't attend the Dayton Hamvention in 1998 ? Then this is your chance to listen to the entire TAPR Digital Forum as well as the Friday night Banquet talk by Doug McKinney, KC3RL. Over three hours of audio all together! The digital forum includes presentations by: Greg Jones, WD5IVD, Steve Bible, N7HPR, Tom McDermott, N5EG, Dewayne Hendricks, WA8DZP, Tom Clark, W3IWI, APRS Update with the authors, and moderator John Ackermann, N8UR. Topics

include: Spread Spectrum, TCP/IP, GPS Projects, Regulatory Affairs, and
much more!

1998 Open Ham Radio Town Meeting held at Dayton HamVention
http://www.tapr.org/tapr/html/townmeeting.98.html
On Sunday, May 17th, 1998, Bill Pasternack, hosted the second Open Ham
Radio Town Meeting at Dayton HamVention. Listen in to this fast paced forum
as various individuals face off on:
     * Should the current voluntary bandplans be made mandatory
     * No-code: Life beyond repeaters.

All the audio pages that TAPR has available are posted on the virtual
meeting page:
http://www.tapr.org/tapr/html/virtual.html

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
---
e-mail: tapr@tapr.org   web: <http://www.tapr.org/>
ftp: ftp.tapr.org
phone: 940-383-0000   fax: 940-565-2544

June 1998

Original source file: tapr-bb.9806
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1998-06/TAPR-BB_1998-06.txt

1. DCC 1998

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 23 Jun 1998 16:14:03 -0500
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v04003a14b1b5cb0391dd@[207.8.125.50]>
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1998 ARRL and TAPR Digital Communications Conference
September 25-27, 1998
Chicago, Illinois (minutes from O'Hare Airport)

Web: http://www.tapr.org/dcc

It's that time again! Mark your calendar and think about what to publish for the upcoming 17th Annual ARRL and TAPR Digital Communications Conference. This is the third year in which the ARRL Digital Communications Conference and TAPR Annual General Meeting are joined into one conference!

The ARRL and TAPR Digital Communications Conference is an international forum for radio amateurs in digital communications, networking, and related technologies, who meet, publish their work, and present new ideas and techniques for discussion. Presenters and attendees have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. The Digital Communications Conference is not just for the digital expert, but for digitally-oriented amateurs at all levels of expertise.

The 1998 ARRL and TAPR Digital Communications Conference will be held September 25-27, 1998, in Chicago, Illinois. This year's conference location is the Holiday Inn Rolling Meadows, just minutes from O'Hare Airport.

Not only is the Digital Communications Conference technically stimulating, it is a weekend of fun for all who have more than a casual interest in any of the ham digital communications modes. This includes APRS operators, digital networks, software writers, modem designers, and digital satellite enthusiasts. The ARRL and TAPR Digital Communications Conference is for all levels of digital operators -- a must conference to attend to become active on a national level. Now, more than ever, amateur radio needs this great meeting of the minds because it is important that we demonstrate a continued need for the frequency allocations we have by pushing forward and documenting our achievements. The ARRL and TAPR Digital Communications Conference is one of the few ways to record our accomplishments and challenge each other to do more.

A Conference for the Beginner, Too

The conference is not just for the digital expert. This year's conference again provides multiple session tracks for beginning, intermediate, and advanced presentations on selected topics in digital communications. Topics will include APRS, satellite communications, TCP/IP, digital radio, Spread Spectrum, and many others. Come to the conference and hear these topics presented by the experts! Don't miss this opportunity to listen and talk to others in these areas.

Symposia and Seminars

In addition to the presentation of papers on Saturday, three symposia/seminars will be held. These sessions are provided to allow those with additional time and interest to make the most of the Digital Communications Conference. For those who may have interest in just one symposium or seminar, registration for the conference is not required to attend these activities. This allows maximum flexibility for those who may want to participate during the Digital Communications Conference, but do not have an entire weekend to devote to the event.

The Second APRS National Symposium will be held on Friday and will be moderated by Steve Dimse, K4HG (the developer of javAPRS). It will likely include many APRS software authors, such as Bob Bruninga, WB4APR (the father of APRS), Keith Sproul, WU2Z, Mark Sproul, KB2ICI (the developers of MacAPRS and WinAPRS), Brent Hildebrand, KH2Z (the developer of APRSPLUS), and other nationally-known APRS leaders. Join this group for the afternoon and evening for in-depth discussions and presentations on the current and future status of APRS. This is a unique opportunity to gain insight into this fast-growing digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning System).

Starting late Friday afternoon, a half-day seminar titled "Infrastructureless Technologies in Amateur Radio," presented by Don Lemke, WB9MJN, will cover the pros and cons of DDMA (directivity division multiple access, a proposed infrastructureless technigue) versus hubbed (cellular style) and other infrastructure dependant techniques, the basic problem of megabaud rate communications into the ham QTH, and some techniques for channel-area acquisition including full duplex/asynchronous versus simplex/synchronous radio/acquisition concepts. This seminar will start late enough on Friday afternoon to allow those flying that day to attend the seminar.

The Sunday morning seminar will be a combination of two different talks that will make one excellent seminar. The first presentation, by Lyle Johnson, WA7GXD, will focus on the upcoming RUDAK digital communications system scheduled to fly on the AMSAT Phase 3D satellite in the near future. Lyle will discuss features, systems design, integration, and experiments. The goal of the presentation is to zero in on the communications capabilities of RUDAK, the performance to be expected from the 153k6 PSK system, the limitations and capacities of the DSP modems, user requirements for receiving RUDAK, requirements for transmitting to RUDAK, and how amateurs can work to make ground operations a reality once the satellite is in operation. Information on how to submit a proposal for experimental time on RUDAK will be presented. The second presentation will be by Tim Shepard, KD1KY, regarding "Packet Radio Networks with Millions or Billions of Stations." This talk will present concepts and materials that make you think about different possibilities of networking in the future. Both Lyle's and Tim's presentations focus on different aspects of future digital communications possibilities.

Third Annual ARRL and TAPR DCC Student Papers Award

ARRL and TAPR especially welcome papers from full-time students to compete for the third annual student papers award. Two $500 travel awards may be given, one in each of the following categories: a) best technical/theory-oriented paper by a student, and b) best educational or community-oriented application paper by a student. The paper should relate directly to a wireless digital communication topic (see the guidelines for more information). Papers co-authored by educators or telecommunications professionals are also eligible for this award as long as a student is the first author. The deadline for receipt of finished student paper manuscript is June 20, 1998. Please note that this deadline is different from the general conference paper submission date. For full details and paper guidelines contact TAPR or browse to http://www.tapr.org/dcc.

Call for Conference Proceeding Papers

Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the conference is not required for publication. The primary purpose of the conference is to communicate ideas and techniques regarding digital communications. Papers written in an informal style are welcome, as well as those written to academic standards. If you know of someone who is doing great things with digital communications, be sure to tell them about this! Papers are due by August 15, 1998, and should be submitted to Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111, or via e-mail to lweinberg@arrl.org. The paper submission guidelines are available on-line (http://www.tapr.org/dcc).

Local/International Co-Host

The 1998 ARRL and TAPR Digital Communications Conference will be co-hosted

by Chicago Amateur Packet Radio Association (CAPRA). CAPRA is one of the oldest packet radio groups in the US. It focuses on education about amateur packet radio, coordination of joint efforts of hams interested in packet radio, and technical and equipment support for a sound packet network in the Chicago area. They have had high-speed packet networks operational since the mid-1980s. Visit the CAPRA Web site at http://www.imaxx.net/capra for more information.

PRUG (Packet Radio User Group of Japan) will be the first International co-host of the ARRL and TAPR Digital Communications Conference. The conference is proud to welcome PRUG as part of the conference. PRUG will be hosting an informal social Friday evening after the seminar and symposium are completed. Visit http://www.prug.or.jp for more information about the organization.

What can you expect during the 1998 ARRL and TAPR Digital Communications Conference?

* A full day of papers, breakout sessions, and selected topics on Saturday for the beginner to advanced amateur digital enthusiast.

* Three seminars/symposia
  Friday (1 PM)
  - Second Annual APRS National Symposium,
    moderated by Steve Dimse, K4HG

  Friday (3 PM)
  - Infrastructure Technologies in Amateur Radio
    conducted by Don Lemke, WB9MJN

  Sunday (8:30 AM)
  - RUDAK Future Operations and Experimentations
    by Lyle Johnson, WA7GXD
  - Packet Radio Networks with Millions or Billions of Stations
    by Tim Shepard, KD1KY

* Third Annual Student Paper Awards.

* TAPR Membership Meeting

* A banquet with special guest speaker Steve Roberts, N4RVE, of Nomadic Research Labs. Creator of the Winnebiko and Behemoth high-tech recumbent bicycles. His current project is focused on Microship technology (http://www.microship.com/).

* SIGs (Special Interest Groups) get-togethers on Saturday, following the banquet

* Informal get-togethers throughout the weekend

* A facility that is perfect for this type of conference

* Informal engineering discussions/demonstration areas

* Motorola Museum located in the area.

* An event at which the most important new developments in amateur digital communications are announced

* Digital 'movers and shakers' from all over the world in attendance

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Conclusion

If you have attended a Digital Communications Conference in the past, remember how much fun it was discussing the latest developments into the wee hours! If you have never been to a Digital Communications Conference, then make your plans now to attend and find out how much fun they can be.

There are few activities where your participation can be so much fun and so important! You will be able to get together with colleagues from all over the world and bring each other up to date on your latest work. Experience all this and more for an unforgettable weekend of ham radio and digital communications. Make your travel and lodging arrangements now. We hope to see you at the ARRL and TAPR Digital Communications Conference, September 25-27!

Full information on the conference and hotel information can be obtained by contacting Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road #337, Tucson, AZ 85749-9399, phone 940-383-0000, fax 940-566-2544, e-mail tapr@tapr.org, browse www.tapr.org/dcc.

Sincerely,

   Steve Ford, WB8IMY, ARRL Conference Co-Chair
   Greg Jones, WD5IVD, TAPR Conference Co-Chair
   Steve Stroh, N8GNJ, Conference Manager
   Mark J. Thompson, WB9QZB, Local Host Liaison
   Carl Bergstedt, K9VXW, Local Host Liaison

Note: If you need conference handouts or flyers for ham club meetings, contact TAPR to get what you need!

Hotel Information

Conference presentations, meetings, and seminars will be held at the Holiday Inn Rolling Meadows. Special DCC rooms rates are $85 per night. When making reservations with the hotel, be sure to indicate you are attending the ARRL and TAPR DCC in order to get the discount. It is highly recommended that you book your room prior to arriving. A block of 75 rooms is reserved until August 31, 1998. After the 75 rooms are booked, rooms will only be available in nearby hotels, so be sure to book your rooms early! The hotel provides transportation to and from O'Hare Airport. Please contact the hotel to arrange specific transportation needs.

   Holiday Inn Rolling Meadows (conference hotel)
   3405 Algonquin Rd
   Rolling Meadows, IL 60008
   Phone 847-259-5000, fax 847-259-0597

Registration

Contact the TAPR office by phone, fax, or e-mail (numbers and addresses are above) to register or for additional meeting information. MasterCard and VISA are accepted.

- Preregistration (before Sept 1): $42.00 *

- Late registration or at door: $47.00 *

* - Conference registration includes Conference Proceedings, Saturday sessions/meetings, and lunch.

- Saturday Evening Dinner (limited space): $20.00 **

** - Includes dinner, speaker, prize drawing

Seminar/symposia

Note: You do not have to be registered for the conference to attend one or more of the seminars/symposia.

- Friday, 1-8 PM, Second Annual APRS National Symposium (full day)

   Registration: $25***

- Friday 3-7 PM, Infrastructure Technologies in Amateur Radio, conducted by Don Lemke, WB9MJN

   Registration: $15***

Sunday 8:30-11 AM and 11:30 AM-2 PM, RUDAK Future Operations and Experimentations by Lyle Johnson, WA7GXD, and Packet Radio Networks with Millions or Billions of Stations by Tim Shepard, KD1KY

   Registration $20***

*** Cost of seminar or symposium includes the cost of handout materials.

Contact TAPR to register for the DCC:

Tucson Amateur Packet Radio
8987-309 E. Tanque Verde Road #337
Tucson, AZ 85749-9399.
phone 940-383-0000, fax 940-566-2544
e-mail tapr@tapr.org, browse http://www.tapr.org

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

Real World, The n.:
5. Anywhere outside a university. "Poor fellow, he's left UT Austin and gone into the real world."

2. Steve Bible, N7HPR on RAIN Report

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Fri, 26 Jun 1998 00:00:05 -0500
To: "TAPR-BB list mailing"<tapr-bb@tapr.org>
Message-ID: <v04003a1cb1b8daf66fc3@[207.43.172.66]>
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The RAIN Report (http://rainreport.com) for the week of June 26 (Friday) features:

"Equipment News From Dayton '98, Part 4

Steve Bible/N7HPR talks about what the Tucson Amateur Packet Radio Corp. (TAPR) introduced at last month's Dayton Hamvention; interviewed by Hap Holly/KC9RP; (13 minutes).

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

Real World, The n.:
5. Anywhere outside a university. "Poor fellow, he's left UT Austin and gone into the real world."

July 1998

Original source file: tapr-bb.9807
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1998-07/TAPR-BB_1998-07.txt

1. TAPR EVM56002 Interface boards and Enclosure Kit

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Wed, 8 Jul 1998 21:06:36 -0500
To: " TAPR/AMSAT DSP "<dsp@tapr.org>,
        "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v04003a0fb1c9d0690a32@[207.8.125.50]>
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Introducing the TAPR EVM56002 Interface boards and Enclosure Kit
http://www.tapr.org/tapr/html/dsp56002evm.html

TAPR is now taking orders for the first round of EVM56002 Interface with enclosure kits until September 15th.

This kit provides:
- An EVM Interface Board Kit and Enclosure for the Motorola EVM56002
- All parts - including screws and standoffs
- Schematics and Documentation (Assembly and Operations)
- Software

A Motorola EVM56002 (DSP) Interface board IS NOT INCLUDED

The price is:

$135.00 US for members of TAPR
or
$150.00 US for non-members
+ shipping/handling

TAPR kits can be complex depending on the kitting experience of each builder. We don't think you will have trouble with the interface kit, but it does require some knowledge and experience to successfully go from a kit to a finished, usable unit, depending on the mode of operations. For data radio applications (i.e. 9600 baud FSK), special modifications must be made to your radio for proper operation of the EVM interface. In addition, the interface kit requires that you have a Motorola EVM56002 Interface unit. These can be purchased from several electronic distributors (see web page).

TAPR requires that kit purchasers provide VISA/MC information or checks/money orders with their initial purchases. Money for the initial kit purchase will be deposited on September 15th, 1998 to cover kitting costs. Orders will be taken for the first 200 units. If more than 200 units are ordered, then a second or third batch will be done as soon as additional parts inventory can be purchased and kitted. In this way, the interface kit will be provided in the exact numbers required for the demand. After this initial kit offering, EVM interface kits will be provided in batches as the demand warrants doing kits. The initial batch of kits will be as large as the demand requires, which we hope is large. The more the merrier!

EVM interface kit orders for the initial purchase will be taken until September 15th, 1998. Orders can be mailed to the TAPR address: 8987-309 E. Tanque Verde Rd #337, Tucson, Az, 85749-9399, call (940) 383-0000 (Office Hours: Tue-Fri, 9am-12noon, 3pm-5pm Central Time), or fax (940) 566-2544. If you have questions concerning the unit, check the web page.

The interface kit has been discussed for about the last year, with a group coming forward late in 1997 to complete the design process. PSR Issue #69, Winter 1998, has the full description with photos. Current information on the kit is now available at http://www.tapr.org/tapr/html/dsp56002evm.html

This design of the radio interface for the Motorola DSP56002EVM is based on Johan Forrer's, KC7WW, original design. In February 1997, Douglas Braun, N1OWU, released his software suite for the EVM, based on the Finnish Alef Null groups work, and revised his interface to be more flexible than Johan's. The TAPR interface is a happy medium between Johan's and Doug's design. The goal is to make the interface flexible for past and present code developed for the EVM and to create a flexible programming interface for future programmers.

The development team consists of:
- Steve Bible, N7HPR — Project Manager, Prototype builder

```
       Lyle Johnson WA7GXD       PCB design and Prototype builder
       Johan Forrer KC7WW        Prototype builder
       Tim Baggett, AA5DF        Prototype builder
       Douglas Braun, N1OWU      Prototype builder
       John Koster, W9DDD        PCB Liaison, Beta Tester
       Mark Hammond, KC4EBR      Beta Tester
       Bdale Garbee, N3EUA       Beta Tester
       Keith Justice, KF7TP      Beta Tester
       John Ackerman, N8UR       Beta Tester
       Frank Perkins, WB5IPM     Beta Tester
       Steven Taft, KA1WX        Beta Tester
       David Borden, K8MMO       Beta Tester
       Louis Cobet, K6MDH        Beta Tester
       Jim Lynch, K4GVO          Beta Tester
       L.J. Shepard              Beta Tester
       Greg Jones, WD5IVD        Assistant Project Manager
       Joe Borovetz, WA5VMS      Part Procurement
       Rich Mulvey, AA2YS        Documentation

-------------------------------------------------------------------------
Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
-------------------------------------------------------------------------
e-mail: tapr@tapr.org       web: <http://www.tapr.org/>
ftp:    ftp.tapr.org
phone:  940-383-0000        fax: 940-565-2544
-------------------------------------------------------------------------
```

2. TAPR 1998 CD-ROM

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Wed, 8 Jul 1998 21:06:09 -0500
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Cc: "Bill  Westradio   Pasternak"<billwa6itf@aol.com>,
        "Len  KB7LPW   Winkler"<lenwink@indirect.com>,
        "Hap  KC9RP RAIN Holly"<hholly@ais.net>,
        "Greg Jones WD5IVD" <wd5ivd@tapr.org>, "Rich   CQ VHF"<CQVHF@aol.com>,
        "Gagne, Jennifer,  N1TDY" <jgagne@arrl.org>,
        "Donald   Rotolo"<73227.2644@compuserve.com>,
        "Stan   Horzepa"<stanzepa@nai.net>,
        "Ham Radio On-line" <vbook@vbook.com>,
        " Tom McDermott "<mcdermot@eagle.aud.alcatel.com>,
        <rlindquist@arrl.org>, "Brad Smith, KC5SP" <brads@galstar.com>
Message-ID: <v04003a15b1c9d4ff1e9b@[207.8.125.50]>
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TAPR 1998 CD-ROM
http://www.tapr.org/tapr/html/cdrom98.html

The TAPR 1998 CD-ROM in its third year is available!

The CD was supposed to have been ready for Dayton, but the CD house we used botched the job big time and now some six weeks after Dayton we have the CDs in the office. For those that ordered the 1998 CD, you should be getting yours in the mail very soon. The CD features updated information and software. Check the web page for the list of current updates.

The CD is an ISO-9660 standard, which will allow it be accessed on any number of platforms.
The price is -- $20, + $5 s/h.

The new virtual audio segments on the 1998 CD include:

* 1997 ARRL and TAPR Digital Communications Conference
        Couldn't attend the 1997 DCC outside Baltimore, MD ? Then this is your chance to listen to the entire conference. Over 30 hours of audio all together! Plus an entire section of photos taken during the conference!

* 1997 Open Ham Radio Town Meeting held at Dayton HamVention
        On Saturday, May 17th, 1997, Len Winkler, KB7LPW, hosted the first Open Ham Radio Town Meeting at Dayton HamVention. Listen in to this fast-paced forum as various individuals face off on:
        Is the ARRL doing all it can to promote the future of Amateur Radio?
        Should contest operators be banned from seeking contacts in parts of the various bands?
        Is the Internet killing ham radio?
        Should there be a CW requirement for voice operation on the High Frequency bands?

* 1997 Texas Packet Radio Society Fall Digital Symposium

TPRS held it six annual fall digital symposium in Austin, Texas on December 6th, 1997. You'll see the latest news and information regarding the TexNet, TAPR's FHSS radio project, and other topics. A good meeting.

TAPR 1997 CD-ROM
http://www.tapr.org/tapr/html/cdrom97.html

TAPR still has plenty of the 1997 CD-ROM. While some of the software isn't the latest, the CD still provides audio meetings for

* 1996 ARRL and TAPR Digital Communications Conference
1996 DCC in Seattle, WA. Over nine hours of audio all together! Plus an entire section of photos taken during the conference!

* 1996 Texas Packet Radio Society (TPRS) Digital Forum at HamCom
TPRS Digital Forum (held since 1988) is held in conjunction with the Dallas/Ft Worth HamCom yearly. Presentations include: DXng by Packet, Spread Spectrum an Overview, Exploring the Internet, Beginning Digital Communications, How to use TexNet, APRS: Radiolocation by Packet, 9600 baud, Packet and the NWS, and Accessing the PACSATs. Some really good talks.

* 1996 TAPR Digital Forum and Banquet Talks (Dayton Hamvention)
The entire TAPR Digital Forum as well as the Friday night Banquet talk by Phil Karn, KA9Q. Over three hours of audio all together! The digital forum includes presentations by: Greg Jones, WD5IVD, Barry McLarnon, VE3JF, Phil Karn, KA9Q, Steve Bible, N7HPR, Barry Buelow, WA0RJT, Paul Newland, AD7I, and moderator John Ackermann, AG9V. Topics include: Spread Spectrum, 56K operations, DAS/PCON, and more! Phil's talk is on "A High-Performance Satellite Mode for the PC."

* Bob Bruninga, WB4APR, discusses the APRS Mic Encoder.
Bob Bruninga, WB4APR, uses the APRS Mic Encoder while discussing its usage. The recorded audio was the result of recording the audio from a scanner listening to Bob talk on his 2-meter radio with GPS and APRS Mic Encoder installed. This is an excellent example of the combination of current narrow-band amateur technology with newer digital technology to enhance tracking options.

* An interview with Joe Borovetz, WA5VMS, on Land Mobile Radio Modifications.
This is an interview with Joe Borovetz, WA5LHS, concerning Land Mobile Radio Modifications and issues for amateur radio usage. Joe is one of the two authors of the upcoming TAPR Land Mobile Radio Modifications Book. Joe covers general information on several radios, minimum test equipment needed, and some general thoughts on the subject at hand.

* 1995 TAPR Annual Meeting, St. Louis, MO.
Couldn't attend the TAPR meeting in March of 1995 ? Well - here is your opportunity using RealAudio to listen in to both the Sunday workshops. The DSP-93 Workshop by Bob Stricklin, N5BRG, and Tom McDermott, N5EG as well as a seminar on Error Control Coding by Phil Karn, KA9Q are made available. Using the Adobe Acrobat format (pdf), we have provided the overheads and between the audio and the overheads you should be able to get a lot from the workshop you couldn't attend!

* Repeater Frequency Coordinators Meeting, Oct 7th, 1995
Hear the entire meeting of the nation's repeater frequency coordinators who met with the ARRL and the FCC in St. Charles, Missouri, October 7th, 1995. It was a politically charged meeting that has changed the face of VHF operation forever. This is because there is now a tentative agreement by which the American Radio Relay League has tentatively agreed, subject to board approval, to represent the nations coordinators to the FCC. This, in exchange for the commission recognizing the work of the coordinators and possibly making their decisions binding on the ham radio community.

* Packet Radio for the Beginner. 1994 Presentation at Dayton HamVention
Join TAPR at the 1994 Digital Forum hosted at Dayton each year. This presentation hears Greg Jones, WD5IVD, discuss the aspects of beginning packet radio. Learn the What? Why? and How? about Packet Radio. This approx 30 min audio presentation shouldn't be missed if you are new to Packet Radio.

* 1982 TAPR Presentation for SLAPR
Listen in on a classic TAPR presentation concerning the TAPR Beta and TNC-1 held during the first years of the TAPR organization. This talk is by Chuck

Green, N0ADI, Lyle Johnson, WA7GXD, and Den Connors, KD2S and was taped in AZ for a presentation that was later shown in St. Louis, MO. A real treat to listen in on the founders of TAPR talk about the new technology and what it might it become -- some of it came true -- some didn't. This is a glimpse into the past! If you really feel the need, the QuickTime movie of the presentation is now available on the TAPR CD-ROM -- only 34Megs!

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
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e-mail: tapr@tapr.org   web: <http://www.tapr.org/>
ftp: ftp.tapr.org
phone: 940-383-0000   fax: 940-565-2544

August 1998

Original source file: tapr-bb.9808
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1998-08/TAPR-BB_1998-08.txt

1. 1998 ARRL and TAPR Digital Communications Conference

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 9 Aug 1998 12:20:14 -0600
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Cc: "HF SIG  list   mailing"<hfsig@tapr.org>, " Spread Spectrum "<ss@tapr.org>,
        " TAPR/AMSAT DSP "<dsp@tapr.org>,
        "APRS SIG  list   mailing"<aprssig@tapr.org>,
        "NETSIG  list   mailing"<netsig@tapr.org>,
        "BBS SIG  list   mailing"<bbssig@tapr.org>,
        " tacgps "<tacgps@tapr.org>, aprsnews@tapr.org, mic-e@tapr.org,
        TAPR Regional Freq <regional_freq@tapr.org>
Message-ID: <v04011707b1f39762e9cf@[168.191.230.109]>
Rendered body type: text/plain
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1998 ARRL and TAPR Digital Communications Conference
September 25-27, 1998
Chicago, Illinois (minutes from O'Hare Airport)

Web: http://www.tapr.org/dcc

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future status of APRS. This is a unique opportunity to gain insight into this fast-growing digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning System).

Starting late Friday afternoon, a half-day seminar titled "Infrastructureless Technologies in Amateur Radio," presented by Don Lemke, WB9MJN, will cover the pros and cons of DDMA (directivity division multiple access, a proposed infrastructureless technique) versus hubbed (cellular style) and other infrastructure dependent techniques, the basic problem of megabaud rate communications into the ham QTH, and some techniques for channel-area acquisition including full duplex/asynchronous versus simplex/synchronous radio/acquisition concepts. This seminar will start late enough on Friday afternoon to allow those flying that day to attend the seminar.

The Sunday morning seminar will be a combination of two different talks that will make one excellent seminar. The first presentation, by Lyle Johnson, WA7GXD, will focus on the upcoming RUDAK digital communications system scheduled to fly on the AMSAT Phase 3D satellite in the near future. Lyle will discuss features, systems design, integration, and experiments. The goal of the presentation is to zero in on the communications capabilities of RUDAK, the performance to be expected from the 153k6 PSK system, the limitations and capacities of the DSP modems, user requirements for receiving RUDAK, requirements for transmitting to RUDAK, and how amateurs can work to make ground operations a reality once the satellite is in operation. Information on how to submit a proposal for experimental time on RUDAK will be presented. The second presentation will be by Tim Shepard, KD1KY, regarding "Packet Radio Networks with Millions or Billions of Stations." This talk will present concepts and materials that make you think about different possibilities of networking in the future. Both Lyle's and Tim's presentations focus on different aspects of future digital communications possibilities.

Third Annual ARRL and TAPR DCC Student Papers Award

The deadline for the third annual ARRL and TAPR Student papers is past, please think about having students submit next year for the travel awards. TAPR and the ARRL especially welcome papers from full-time students to compete
for these student papers award. Two $500 travel awards may be given, one in each of the following categories: a) best technical/theory-oriented paper by a student, and b) best educational or community-oriented application paper by a student. The paper should relate directly to a wireless digital communication topic (see the guidelines for more information). Papers co-authored by educators or telecommunications professionals are also eligible for this award as long as a student is the first author. The deadline for receipt of finished student paper manuscript is June 20, 1999. Please note that this deadline is different from the general conference paper submission date. For full details and paper guidelines contact TAPR or browse to http://www.tapr.org/dcc.

Call for Conference Proceeding Papers

Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the conference is not required for publication. The primary purpose of the conference is to communicate ideas and techniques regarding digital communications. Papers written in an informal style are welcome, as well as those written to academic standards. If you know of someone who is doing great things with digital communications, be sure to tell them about this! Papers are due by August 15, 1998, and should be submitted to Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111, or via e-mail to lweinberg@arrl.org. The paper submission guidelines are available on-line (http://www.tapr.org/dcc).

Local/International Co-Host

The 1998 ARRL and TAPR Digital Communications Conference will be co-hosted by Chicago Amateur Packet Radio Association (CAPRA). CAPRA is one of the oldest packet radio groups in the US. It focuses on education about amateur packet radio, coordination of joint efforts of hams interested in packet radio, and technical and equipment support for a sound packet network in the Chicago area. They have had high-speed packet networks

operational since the mid-1980s. Visit the CAPRA Web site at
http://www.imaxx.net/capra for more information.

PRUG (Packet Radio User Group of Japan) will be the first International
co-host of the ARRL and TAPR Digital Communications Conference. The
conference is proud to welcome PRUG as part of the conference. PRUG will
be hosting an informal social Friday evening after the seminar and
symposium are completed. Visit http://www.prug.or.jp for more information
about the organization.

What can you expect during the 1998 ARRL and TAPR Digital Communications
Conference?

*   A full day of papers, breakout sessions, and selected topics on
    Saturday for the beginner to advanced amateur digital enthusiast.

*   Three seminars/symposia
       Friday (1 PM)
         - Second Annual APRS National Symposium,
             moderated by Steve Dimse, K4HG

       Friday (3 PM)
         - Infrastructure Technologies in Amateur Radio
             conducted by Don Lemke, WB9MJN

       Sunday (8:30 AM)
         - RUDAK Future Operations and Experimentations
             by Lyle Johnson, WA7GXD
         - Packet Radio Networks with Millions or Billions of Stations
             by Tim Shepard, KD1KY

*   Third Annual Student Paper Awards.

*   TAPR Membership Meeting

*   A banquet with special guest speaker Steve Roberts, N4RVE, of Nomadic
    Research Labs. Creator of the Winnebiko and Behemoth high-tech recumbent
    bicycles. His current project is focused on Microship technology
    (http://www.microship.com/).

*   SIGs (Special Interest Groups) get-togethers on Saturday, following
    the banquet

*   Informal get-togethers throughout the weekend

*   A facility that is perfect for this type of conference

*   Informal engineering discussions/demonstration areas

*   Motorola Museum located in the area.

*   An event at which the most important new developments in amateur
    digital communications are announced

*   Digital 'movers and shakers' from all over the world in attendance

---

Conclusion

If you have attended a Digital Communications Conference in the past,
remember how much fun it was discussing the latest developments into the
wee hours! If you have never been to a Digital Communications Conference,
then make your plans now to attend and find out how much fun they can be.

There are few activities where your participation can be so much fun and so
important! You will be able to get together with colleagues from all over
the world and bring each other up to date on your latest work. Experience
all this and more for an unforgettable weekend of ham radio and digital
communications. Make your travel and lodging arrangements now. We hope to
see you at the ARRL and TAPR Digital Communications Conference, September
25-27!

Full information on the conference and hotel information can be obtained by
contacting Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road #337,
Tucson, AZ 85749-9399, phone 940-383-0000, fax 940-566-2544, e-mail
tapr@tapr.org, browse www.tapr.org/dcc.

Sincerely,

   Steve Ford, WB8IMY, ARRL Conference Co-Chair
   Greg Jones, WD5IVD, TAPR Conference Co-Chair
   Steve Stroh, N8GNJ, Conference Manager
   Mark J. Thompson, WB9QZB, Local Host Liaison
   Carl Bergstedt, K9VXW, Local Host Liaison

Note: If you need conference handouts or flyers for ham club meetings,
contact TAPR to get what you need!

Hotel Information

Conference presentations, meetings, and seminars will be held at the
Holiday Inn Rolling Meadows. Special DCC rooms rates are $85 per night.
When making reservations with the hotel, be sure to indicate you are
attending the ARRL and TAPR DCC in order to get the discount. It is highly
recommended that you book your room prior to arriving. A block of 75 rooms
is reserved until August 31, 1998. After the 75 rooms are booked, rooms
will only be available in nearby hotels, so be sure to book your rooms
early! The hotel provides transportation to and from O'Hare Airport.
Please contact the hotel to arrange specific transportation needs.

   Holiday Inn Rolling Meadows (conference hotel)
   3405 Algonquin Rd
   Rolling Meadows, IL 60008
   Phone 847-259-5000, fax 847-259-0597

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
----
e-mail: tapr@tapr.org   web: <http://www.tapr.org/>
ftp: ftp.tapr.org
phone: 940-383-0000   fax: 940-565-2544
----

2. Fwd: [TAPR-BB:424] Searchable Web Archive of Ham Mailing Lists -- Update

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 10 Aug 1998 00:12:33 -0600
To: "TAPR-BB list   mailing"<tapr-bb@tapr.org>
Message-ID: <v0401170db1f43fc636e8@[168.191.230.109]>
Rendered body type: text/plain

Sender: John Ackermann N8UR <jra@febo.com>
Subject: Searchable Web Archive of Ham Mailing Lists -- Update

First, for those of you who've tried using the ham radio mailing list
archive at http://www.febo.com/list-archive I just discovered that the
indexing has been broken for a while and you probably weren't able to
get searches to work. That's now been fixed, so if you've given up on
the site in disgust, please give it another try.

For those of you who don't know what I'm talking about, I maintain
searchable archives of the:

TAPR BBS-SIG (from May, 1994)
TAPR FCC (from August, 1994)
TAPR NET-SIG (from March, 1994)
TAPR-BB (Announcements) (from August, 1994)
NOS-BBS (from December 1993)
UCSD TCP-Group (from October, 1993)

mailing lists at http://www.febo.com/list-archive/

These are searchable by keywords, chronologically, and by thread. The
indexes are updated nightly. I hope to add the Linux-Hams list, and the
TNOS lists, as soon as I'm able to get the archives in the proper format.

Enjoy!

73,
John N8UR
jra@febo.com
http://www.febo.com

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

September 1998

Original source file: tapr-bb.9809
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1998-09/TAPR-BB_1998-09.txt

1. 1998 ARRL and TAPR DCC this coming weekend !

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 22 Sep 1998 17:41:08 -0500
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Cc: "HF SIG  list   mailing"<hfsig@tapr.org>, " Spread Spectrum "<ss@tapr.org>,
        " TAPR/AMSAT DSP "<dsp@tapr.org>,
        "APRS SIG  list   mailing"<aprssig@tapr.org>,
        "NETSIG  list   mailing"<netsig@tapr.org>,
        "BBS SIG  list   mailing"<bbssig@tapr.org>,
        " tacgps "<tacgps@tapr.org>, aprsnews, mic-e,
        TAPR Regional Freq <regional_freq@tapr.org>
Message-ID: <v04011717b22dd78686a9@[128.83.74.103]>
Rendered body type: text/plain
```

Just as a reminder the 1998 ARRL and TAPR Digital Communications Conference
in Chicago, IL is happening this weekend!

The conference schedule and information is on-line at http://www.tapr.org/dcc
The abstract page should be on-line shortly.

Hope to see you in Chicago this weekend!

Cheers - Greg Jones, WD5IVD

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

November 1998

Original source file: tapr-bb.9811
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1998-11/TAPR-BB_1998-11.txt

1. 1998 ARRL and TAPR DCC Audio, Photos, Abstracts, and More

```
From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 30 Nov 1998 15:25:13 -0600
To: "HF SIG  list   mailing"<hfsig@tapr.org>, " Spread Spectrum "<ss@tapr.org>,
        " TAPR/AMSAT DSP "<dsp@tapr.org>,
        "APRS SIG  list   mailing"<aprssig@tapr.org>,
        "NETSIG  list   mailing"<netsig@tapr.org>,
        "BBS SIG  list   mailing"<bbssig@tapr.org>,
        " tacgps "<tacgps@tapr.org>, aprsnews, mic-e,
        TAPR Regional Freq <regional_freq@tapr.org>,
        "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v04020a06b288bb17413f@[128.83.74.104]>
Rendered body type: text/plain
```

The ARRL and TAPR DCC Web page has been updated to include all recorded segments from the conference as well as a story and photo section.

Visit: http://www.tapr.org/dcc/

* Listen to sessions from the 1998 ARRL and TAPR DCC over 30 hours covering
        Keynote by Dale Hatfield, W0IFO
                Chief of the FCC's Office of Engineering and Technology
        APRS National Symposium
        Packet Radio Users Group of Japan (PRUG) Technical Seminar
        Technical Paper Presentations
        Introductory Sessions
                Introduction to Spread Spectrum
                Introduction to PIC Development
                Introduction to MMDS/LMDS
        Friday Technical Seminar featuring Don Lemke, WB9MJN on
                Infrastructureless Packet Radio Networks
        Sunday Technical Seminars featuring:
                Lyle Johnson, WA7GXD -
                        RUDAK digital communications system
                Tim Shepard, KD1YK -
                        Packet Radio Networks with Millions or Billions of
Stations

* 1998 Conference Overview Story

* Look at photos from the 1998 ARRL and TAPR DCC

* Review Abstracts from 1998 Proceedings

* Check out past Digital Communication Conferences Audio and Abstracts

as of now, the 1999 ARRL and TAPR DCC will be hosted in Phoenix, AZ in Sept
'99. More information will be posted once a date and location has been
decided.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
----
e-mail: tapr@tapr.org   web: <http://www.tapr.org/>
ftp: ftp.tapr.org
phone: 940-383-0000   fax: 940-565-2544

December 1998

Original source file: tapr-bb.9812
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1998-12/TAPR-BB_1998-12.txt

1. [TAPR-BB:434] New SIG for the Kenwood THD7A/E

```
From: Greg Jones <wd5ivd@tapr.org>
Date: Wed, 30 Dec 1998 16:09:40 -0600
To: "TAPR-BB  list   mailing"<tapr-bb@tapr.org>
Message-ID: <v04020a0eb2b0551499fd@[207.43.172.66]>
Rendered body type: text/plain
```

```
Sender: "Horzepa, Stan" <Stan_Horzepa@adc.com>
Subject: New SIG for the Kenwood THD7A/E

TAPR is pleased to announce the formation of a new special
interest group, the HTAPRS SIG.

The purpose of HTAPRS is to provide a forum for the discussion
of issues related to the Kenwood THD7A/E transceiver. (HTAPRS
is also intended to lessen the number of messages on TAPR's
APRSSIG by moving THD7A/E traffic off that SIG.)

To subscribe to the HTAPRS mail list, send email to
listserv@tapr.org with the following text in the body of the
message:

   subscribe htaprs your_first_name your_last_name
```

January 1999

Original source file: tapr-bb.9901
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1999-01/TAPR-BB_1999-01.txt

1. TAPR Announcements Welcome Message

From: Lyris <lyris@lists.tapr.org>
Date: Sun, 24 Jan 1999 12:33:00 -0600
To: lyris.tapr-bb@tapr.org
Message-ID: <LYR818-356-1999.01.24-12.33.00--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

```
**********************************************************************
*                PLEASE SAVE THIS WELCOME MESSAGE!                   *
**********************************************************************



_____________________________________
_________/   ____/   _/_____/ _/_____/
   _/     _/      _/ _/     _/ _/     _/
  _/     _/____/_/ _/_____/ _/_____/
 _/     _/      _/ _/       _/    _/
_/     _/      _/ _/       _/     _/
_____________________________________

Welcome to TAPR's Announcements Mail List!


The TAPR Announcements Mail List is your pipe line to find out the
latest bulletins and announcements regarding TAPR events, membership,
news, and developments.


Mechanics of the List
---------------------
This is an announcement list only.  No general posts are accepted.

Information on TAPR events and bulletins will be posted here as they are
made available.  This is where you can find out about things between PSRs!

Questions and comments should be sent to tapr@tapr.org


-----

To post messages to the tapr-bb list, send email to:

        tapr-bb@lists.tapr.org


To unsubscribe from this mailing list, surf to:

   http://www.tapr.org/cgi-bin/lyris.pl?enter=tapr-bb

or send email to:

   lyris@lists.tapr.org

with the following line in the body of the message:

   unsub tapr-bb


The host of this list is:

   Tucson Amateur Packet Radio (TAPR)
   tapr@tapr.org
   http://www.tapr.org
   8987-309 E Tanque Verde Rd. #337, Tucson, AZ 85749-9399,
   phone 940-383-0000, fax 940-566-2544


------------------------------------------------------------------------


Just so that you have all the commands neatly contained in one place,
here is just about everything you will need to know. Note that this list
```

is running on a Lyris server. Please be aware that the commands might be
different from those that you are used to using on other list servers.
(For more information on Lyris, see <http://www.lyris.com/>.)

1. First of all, almost everything that you might need to do on the
   server is most easily and effectively performed via Lyris's Web
   interface at <http://www.tapr.org/cgi-bin/lyris.pl>.

2. In case you do not have Web access, here are some key commands; in all
   cases, the default server address is: <lyris@lists.tapr.org>. Other
   addresses are shown where appropriate. Note that commands may be placed
   in either the subject line or in the body of the message:

```
               SUBSCRIBING:
                 subscribe tapr-bb your_name
                 join tapr-bb your_name
                 alternate address: join-tapr-bb@lists.tapr.org

               UNSUBSCRIBING:
                 unsubscribe tapr-bb
                 leave tapr-bb
                 alternate address: leave-tapr-bb@lists.tapr.org

               SETTING MEMBERSHIP TO DIGEST MODE:
                 set tapr-bb digest

               SETTING MEMBERSHIP TO INDEX MODE:
                 set tapr-bb index

               SETTING MEMBERSHIP TO DISCUSSION MODE:
                 set tapr-bb mail

               TEMPORARILY SUSPENDING MAIL FROM THE LIST:
                 set tapr-bb nomail

               RESUMING MAIL FROM THE LIST:
         (command depends on your preferred mode)
                 set tapr-bb mail
                 set tapr-bb digest
                 set tapr-bb index

               ACKNOWLEDGMENT:
                 set tapr-bb ack
                   (sends you a confirmation message when your posts are sent)
                 set tapr-bb noack
                   (no confirmation message when posts are distributed)

               RECEIVING COPIES OF YOUR OWN POSTS:
                 set tapr-bb repro
                   (receive copies of your own posts)
                 set tapr-bb norepro
                   (do not receive copies of your own posts)

               SETTING YOUR PASSWORD:
                 set tapr-bb pw=mypassword
                   (where "mypassword" is the password you wish to set)

               DETERMINING YOUR MEMBERSHIP SETTINGS:
                 query tapr-bb

               RETRIEVING THE CURRENT VERSION OF THIS DOCUMENT:
                 get tapr-bb hello

               MORE INFORMATION ON LYRIS'S COMMANDS:
                 help

               POSTING TO THE LIST:
                 You must be a subscriber to post messages. Sending
                 mail to this address will distribute it to all the members of the
                 mailing list:  tapr-bb@lists.tapr.org
```

3. CHANGING YOUR SETTINGS/ADDRESS VIA THE WEB INTERFACE: To do this, go
   to <http://www.tapr.org/cgi-bin/lyris.pl> and click the link in the
   "Change Your Settings" section. You'll need to enter your e-mail
   address and password (if you chose one) to continue.

(If you've forgotten your password, you can type in your e-mail address
 in the field at the bottom of the page and click "Get password" to
 request Lyris to e-mail your password to you.)

At the following page, you can read messages, post a message, adjust
your settings, or unsubscribe. From the settings page, you can change
your status (MAIL, DIGEST, INDEX, or NOMAIL), choose whether or not to
see your own messages, and choose whether or not you want to receive a
separate acknowledgement via e-mail when one of your messages is posted
to the list, You can also change your e-mail address if you need to.
When you change your settings, make sure you click the "Save" button at
the bottom of the page.

4. ARCHIVES: The tapr-bb SIG archives are available on the Web, at the
   following URL: <http://www.tapr.org/sigf.html>

5. BOUNCED MAIL: One of the key features of Lyris is its ability to handle
   mail bounces transparently to the list owner; as such, bounced mail
   will be handled primarily by the Lyris list server.

6. POSTS/REPLIES FROM DIGEST USERS: You *must* change the Subject: line
   when replying to a digest; all posts with "tapr-bb DIGEST" in the
   Subject: line will be rejected by the server (you will receive a
   "rejection letter" when this happens).

---

2. [tapr-bb] Test

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 24 Jan 1999 17:44:08 -0600
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-383-1999.01.24-17.44.23--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

This is a test of tapr-bb

Greg

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

---

3. [tapr-bb] New Web pages

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Tue, 26 Jan 1999 15:12:48 -0600
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-1310-1999.01.26-15.13.09--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

http://www.tapr.org/taprf/

should be working, except for the new mail archive and glimpse search
engine. I'll be working on that later this week.

All the other links should be working. There is a little clean up and
addition to the APRS SIG page, but otherwise everything should be fine.

Please bang away and let me know what you find and what should be changed.

Greg

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

---

4. [tapr-bb] New TAPR Search/Archives

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 31 Jan 1999 00:49:52 -0600
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-2520-1999.01.31-00.50.22--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

TAPR is proud to announce that the last of the scheduled site updates for
the first of the year are on-line. You can visit us at: http://www.tapr.org

You have already been involved with the first of three major changes to the
TAPR.ORG system -- the first major change was the implementation of the
Lyris list system.

The second part is a major web site revision. This revision should allow
web pages to be found easier and allow quicker links between sections.

The SIG page contains lectures and presentations as well as links to other
sites. These links are in need of update. Maybe someone would like to
volunteer to maintain some of the specific pages ?

The third update is a new on-line search and mail archive system. As many
have noted over the past several months, our previous search engine had
problems especially with the size of the APRS SIG message base. The new
one works very well.

You can find the new search mail archive engine at:
http://www.tapr.org/tapr/html/sigf.html

The search section is located under each SIG.

We hope you will enjoy these new features on the TAPR.ORG site.

Cheers - Greg Jones, WD5IVD
President, TAPR

P.S. Thanks to all those TAPR members out there that support this work.

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

5. [tapr-bb] TAPR PIC-Encoder Evals Available

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 31 Jan 1999 23:13:15 -0600
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-2728-1999.01.31-23.28.54--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

If you haven't read about it in the TAPR PSR, TAPR is taking orders for the
Evaluation round of the TAPR PIC-E (PIC Encoder) as shown at this last
years ARRL and TAPR Digital Communications Conference.

The purpose of the Evaluation units is to get further feedback on the
current design before finalizing on the future kit.

For details visit: http://www.tapr.org/tapr/html/Fpice.html

Please note that this is an evaluation unit and not a final kit. If you
don't like participating in coding efforts, giving input on manuals and
operational issues, and making changes in hardware on your own as things
progress over the evaluation period then this is something you should
probably pass on.

Cheers - Greg Jones, WD5IVD

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org

To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

February 1999

Original source file: tapr-bb.9902
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1999-02/TAPR-BB_1999-02.txt

1. [tapr-bb] Office closed this week

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 21 Feb 1999 11:11:35 -0600
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Cc: " TAPR SYS "<tapr-sys@lists.tapr.org>
Message-ID: <LYR818-6962-1999.02.21-11.12.58--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Due to a death in the Jones family, the TAPR office will be closed for the
week.

Greg Jones, WD5IVD
President TAPR

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

2. [tapr-bb] GPSD Interruption

From: "Paul J. Toth - K2SEC" <ptoth1@tampabay.rr.com> (by way of Greg
Jones, WD5IVD)
Date: Sun, 21 Feb 1999 12:23:59 -0600
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-6988-1999.02.21-12.44.06--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

WASHINGTON (AP) -- Civilian and military ships and planes could feel the

effect of a Pentagon plan to disrupt its satellite navigation over North
Carolina next week.

The Defense Department will hold tests to prepare for potential loss of
the Global Positioning System-a military-run network which provides
longitudinal and latitudinal coordinates for ships and planes with
appropriate receivers.

The tests and accompanying disruptions could affect the civilian ships
and aircraft that use the 24-hour network to help guide them.

The Federal Aviation Administration and the Coast Guard issued notices
Friday, cautioning pilots and ship operators against relying on GPS
signals during certain four-hour periods from Monday through Saturday
next week. However, a spokesman for the U.S. Atlantic Command, which is
running the test, told The Washington Post he expected "only minimal
impact" on civilian >users.

Affected areas will vary greatly according to altitude. For ships, it
will involve a circular region within a radius of 40 miles centered
about 120 miles east of Wilmington, N.C. For planes cruising at 40,000
feet, the affected area expands to a radius of 350 miles and reaches as
far south as Vero Beach, Fla., and as far north as >Sea Isle, N.J.

Officials said there were no reports of civilian safety problems during
previous tests held over North Carolina and Nevada. During the tests,
military crews will be evaluated on their ability to identify that GPS
systems are not working and on finding other means of navigation.

73!

Paul J. Toth - K2SEC
West Central Florida Section Committee
West Central Florida SKYWARN Group
Secretary-Clearwater Amateur Radio Society

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

3. [tapr-bb] TAPR Technology Demo Day

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 22 Feb 1999 10:32:38 -0600
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-7204-1999.02.22-10.34.13--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

TAPR is proud to announce the first annual Technology Demo Day
sponsored by the TAPR APRS SIG.

The purpose of this event is to demonstrate technology independence at the
location of Field Day. Technologies like Packet Radio, SSTV, ATV, Spread
Spectrum, IGates and other operating modes accessed via RF means only will
be allowed, since this reflects current emergency situations at disaster
scenes in our present day world.

The 1999 Technology Demo Day is to coincide with the ARRL Field Day.

Full details are available at http://www.tapr.org/tdfd

1999 Technology Demo Day

* Commercial Power Restriction
  No commercial power is allowed for stations submitting a score.

* Band of operation:
  Any frequencies that are currently allowed for the mode in use. HF,
  VHF, etc

* Use of networks and digipeaters:
  Digipeaters, Networks, can be used for contacts
  All APRS paths allowed.
  Sites must use RF (No direct Inet)

* Participants:
  Any licensed amateur radio operator may participate.
  Particpants that are at a direct connection to the net can participate
  but are not permitted to submit scores.

* Operator Designations:
  Single Operator designated by "SO".
  Multi Operator by "MO"
  No Operator by "NO"

* Minimum exchange consists of:
  Call Sign, ARRL section, Operator Designation (SO, MO, NO)

* Submission of scores:
  Do not send your Logs. Send only your score.
  Send your score to kb2scs@worldnet.att.net or use
  http://www.tapr.org/tdfd
  Scores must be submitted within two weeks of the end of the event.

* Points:
    o 25 points for receiving the ARRL message in digital form

    o 2 points for every LIVE packet QSO (packet network, conference
      nodes, digis, etc)

    o 1 point for every APRS station "received"
    o 2 points for every APRS station exchanging messages

    o 25 points for receiving ATV signals from a range over 5 miles
    o 25 points for transmitting ATV to another station over 5 miles

    o 5 points for every received SSTV picture received
    o 5 points for every transmitted SSTV contact

    o 25 points for receiving any Satellite digital MESSAGE
    o 25 points for transmitting any Satellite digital Message.

o 25 points for making a complete exchange using Spread Spectrum
o 5 points for each Spread Spectrum contact thereafter

Suggested Operating instructions

* HOOK UP YOUR SPEAKER.
  If you aren't listening to the packets, then you may not know what is going on the channel. TNC's do not detect collisions. DCD's do not either, so just because the little green light is OFF, does not mean the channel is not all QRM
* Operate normally.
  USE SHORT packets and MINIMUM PATH.
  Use WIDEN-N where possible.
  Keep hops practical for your area. (any more than 3 probably impossible)..
  Work everyone you see on mail/traffic pages.
* ACKS are not required!
  If you get a QSL message from the other station, don't wait for an ACK. Erase the outgoing message to reduce QRM!
* Internet Gateways
  The key here is that IGates only pass through MESSAGEs to LOCAL stations in their area. This means you can QSO with anyone if you already know their callsign! You will probably NOT see their posits since only messages go via IGates (normally). This is why you should always include your GRIDSQ in all of your text messages.
  Here are some ways we have come up with to get around these quirks for:
    * a) Assume an SSID of -6 for stations and guess at some APRS calls...
    * Watch your traffic list. As soon as anyone QSO's anyone in your area, you will see them for a return QSO.
    * Send a CQ FD MESSAGE with your GRIDSQ and report to a DIGI in a known area with an IGate. This will go through all IGates.
    * Do a MAPS-OVERLAY-DIGIS for an area to see a good target call. (See C)
    * Do NOT send CQFD or TARGET messages until you have exhausted all other contacts, else we may totally BLOCK the RF channels around IGates.
    * Once you are working via IGATES, PLEASE minimize your path to ONLY the hops needed to hit your local IGate.
    * Home Stations If you are not going to operate, please set up your UN-ATTENDED home station for AUTOREPLY with something like 'QSL. [gridsq].(NO), ARRL section, etc. For APRSdos this simply means send ONE message to the callsign of REPLY and make sure this message is the first in your SEND list.

APRS® is registered to Bob Bruninga, WB4APR.

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399

e-mail: tapr@tapr.org web: <http://www.tapr.org/>
ftp: ftp.tapr.org
phone: 940-383-0000 fax: 940-565-2544

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
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March 1999

Original source file: tapr-bb.9903
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1999-03/TAPR-BB_1999-03.txt

1. [tapr-bb] Ham Mailing Lists Archive -- Working Again

From: John Ackermann <jra@febo.com>
Date: Fri, 05 Mar 1999 19:59:25 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-9220-1999.03.05-23.41.41--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I have a web-based seaerchable archive of several digital and packet
radio related mailing lists available at http://www.febo.com/list-archiv
e

The archive currently includes the following mailing lists:

            TAPR BBS-SIG Mailing List -- from May, 1994

            TAPR FCC Mailing List -- from August, 1994

            TAPR NET-SIG Mailing List -- from March, 1994

            TAPR-BB (Announcements) Mailing List -- from August, 1994

            NOS-BBS Mailing List -- from December 1993

            UCSD TCP-Group Mailing List -- from October, 1993

It's searchable by keywords as well as well as by date or thread.

For the last several months, the archive didn't work reliably due to a
bug (unknown to me at the time) in the indexing software. That's been
fixed now, so searches should once again work properly (I hope...).

I'm hoping to add additional mailing lists to the collection; if you
have (or know of) comprehensive archives of other packet or digital
radio mailing lists, please let me know.

Enjoy!

73,
John N8UR
jra@febo.com
http://www.febo.com

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To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

2. [tapr-bb] TAPR Activities @ Dayton 1999

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Wed, 24 Mar 1999 11:54:55 -0600
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-12313-1999.03.24-11.57.45--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

TAPR Dayton Activities 1999
for details visit: http://www.tapr.org/tapr/html/Fdayton.html

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Attending the 1999 Dayton Hamvention? Then don't miss out on PACK*BASH!

What?
       An event for the digitally-inclined ham, featuring:
        * Buffet dinner
        * "A Little Technology Goes a Long Way" -- Keynote address
                by Dave Pederson, N7BHC
        * TAPR special interest group meetings
        * "Birds of a Feather" gatherings

When?
        Friday evening, May 14, 1999

Doors open at 7:00 pm; dinner served at 7:30 pm
Speaker and meetings after dinner

Where?
NCR "Sugarcamp" Conference Center, 101 W. Schantz Ave. --
South of downtown Dayton, just west of Main St. (Rt 48).
Maps available on the TAPR web site (www.tapr.org) or at the
TAPR booth.

How?
Dinner requires advance registration and payment through TAPR.
Tickets will be available at the TAPR booth on Friday, though
we strongly encourage registration <before> Hamvention. The cost
is $20.00 per person, tax and tip included.

All amateurs are welcome to attend, enjoy the speaker, and
particpate in the meetings, although only those purchasing a
dinner can eat.

To register, contact:
PACK*BASH
c/o TAPR
8987-309 E. Tanque Verde Road #337
Tucson, AZ 85749-9399

Phone: (940) 383-0000
Fax: (940) 566-2544
Internet: tapr@tapr.org

Visa/Mastercard Accepted

Who?
PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet
Radio, the national leader in digital communication -- and the
Miami Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to
http://www.tapr.org/tapr/html/dayton.html,
or send email to tapr@tapr.org.

You can request information via packet radio at
BASH@W8APR.#DAY.OH.USA.NOAM.

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

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To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

3. [tapr-bb] PIC-E Kit Update

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Wed, 31 Mar 1999 13:34:18 -0600
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-13378-1999.03.31-13.34.24--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

March 31st, 1999

The PIC-E Evaluation has come to an end. The PIC-E development team has
finalized the minor changes to the kit based on the eval input and we are
scheduling the final version of the PIC-E to be shipping around the time of
the Dayton HamVention (we plan to have units at Dayton as well).

The TAPR Office is now taking orders on this final version of the PIC-E kit.

Full details are on http://www.tapr.org/tapr/html/Fpice.html

The web page will be updated later this week detailing what minor changes
to the final unit are being made.

You can get your name at the first of the list by ordering before Dayton.

Thanks to those that participated in the Evaluation process.

Cheers - Greg Jones, WD5IVD

Greg Jones, WD5IVD
President TAPR (http://www.tapr.org)
PhD Candidate, Instructional Technology, UT Austin

email: wd5ivd@tapr.org
web: http://www.tapr.org/~wd5ivd

Experience is what you get when you were expecting something else.

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April 1999

Original source file: tapr-bb.9904
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1999-04/TAPR-BB_1999-04.txt

1. [tapr-bb] TAPR Board of Directors Election Reminder

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Thu, 8 Apr 1999 12:36:12 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-14734-1999.04.08-12.39.41--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

This is a reminder to all TAPR members* that the TAPR Board of Directors
Election is happening until April 15th.

The current PSR supplied the necessary information for voting
electronically or via the mail.

If you don't know the web address or have lost your voter verification
number, then please send e-mail to tapr@tapr.org or call the TAPR office
(940) 383-0000 and Dorothy can supply you with the necessary information
for voting on-line.

The following people this year are running for the TAPR board of directors.

        Steve Bible, N7HPR
        Steve Dimse, K4HG
        Bob Hansen, N2GDE
        Steve Stroh, N8GNJ

Your vote as a member is important -- be sure to vote!

Cheers - Greg Jones, WD5IVD
President, TAPR

----
* membership current as of or before January 1, 1999 to be able to vote.

Tucson Amateur Packet Radio
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----
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To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

2. [tapr-bb] TAPR Board of Directors Election Results

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Sun, 18 Apr 1999 15:34:13 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-16655-1999.04.18-15.43.56--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Election Results

The last issue of the PSR had the election ballot for Board of Directors.
First, I would like to thank all those who took the time to ballot by mail
or over the Internet. We had four excellent members running for the three
position that were available. As one member messaged me: "Greg, how am I
to vote this year! The selection of candidates are to difficult to select
from." I think this statement sums up the quality of the members we had
running for board positions this year.

The number of members who cast ballots was up this year, but still
disappointing that we had less than 6% of the general membership voting.

        The results of the election are as follows:
        Steve Bible, N7HPR   91.35%
        Steve Dimse, K4HG   78.85%
        Bob Hansen, N2GDE   64.42%
        Steve Stroh, N8GNJ   59.62%

I would like to welcome back to the board Steve Bible, N7HPR, and Bob
Hansen, N2GDE. Steve Dimse, K4HG, will be joining the board as the newest
member at the next Board of Directors meeting which will be held during
Dayton 1999 Hamvention weekend. Steve Stroh, N8GNJ, has been our
organizational secretary for the last two years and we hope that he will
remain in that position for the coming year.

Thanks again to all those who made this process possible.

Greg Jones, WD5IVD
President

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

3. [tapr-bb] TAPR activities at Dayton HamVention

From: "Greg Jones, WD5IVD" <wd5ivd@tapr.org>
Date: Mon, 19 Apr 1999 12:58:12 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-16810-1999.04.19-13.03.39--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

TAPR Dayton Activities 1999
for details visit: http://www.tapr.org/tapr/html/Fdayton.html

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TAPR Digital Forum on Friday

The schedule for the TAPR digital forum is:
        10:00 - 10:05am (5 min)
              Introduction to Forum, John Ackermann, N8UR

        10:05 - 10:30am (25min)
              TAPR Update, Greg Jones, WD5IVD

        10:30 - 11:00am (30 min)
              Linux AX.25 Update, John Ackermann, N8UR

        11:00 - 11:30am (30 min)
              PIC Development Update, Steve Bible, N7HPR and John Hansen, W2FS

        11:30 - 12:00noon (30 min)
              GPS Projects, Steve Bible, N7HPR

        12:00noon - 12:30pm (30 min)
              Compact Flash Card Project, John Koster, W9DDD

        12:30 - 1:00pm (30 min)
              TAPR APRS News, Steve Dimse, K4HG and Stan Horzepa, WA1LOU

        1:00pm - 1:45pm (45 min)
             FHSS Radio Project Update, Tom McDermott, N5EG

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        * "A Little Technology Goes a Long Way" -- Keynote address
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        * TAPR special interest group meetings
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Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

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To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

4. [tapr-bb] ARRL and TAPR 1999 DCC Announcement

From: Greg Jones <wd5ivd@tapr.org>
Date: Wed, 28 Apr 1999 09:53:26 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-18106-1999.04.28-10.09.32--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

1999 ARRL and TAPR Digital Communications Conference
September 24-26, 1999
Phoenix, Arizona

Web: http://www.tapr.org/dcc

It's that time again! Time to start making your travel plans and
thinking about what to publish for the upcoming 18th Annual ARRL
and TAPR Digital Communications Conference.

The ARRL and TAPR Digital Communications Conference is an
international forum for radio amateurs in digital communications,
networking, and related technologies to meet, publish their work, and
present new ideas and techniques for discussion. Presenters and
attendees will have the opportunity to exchange ideas and learn about
recent hardware and software advances, theories, experimental results,
and practical applications. The Digital Communications Conference is
not just for the digital expert, but for digitally-oriented amateurs of all
levels of experience.

The 1999 ARRL and TAPR Digital Communications Conference will be held September 24-26, 1999 in Phoenix, Arizona. This year's conference location is just minutes away from the Phoenix Sky Harbor International Airport (PHX).

Not only is the Digital Communications Conference technically stimulating, it is a weekend of fun for all who have more than a casual interest in any of the ham digital communications modes. This includes networkers, sysops, software writers, modem designers, and digital satellite communications enthusiasts. The ARRL and TAPR Digital Communications Conference is for all levels of digital operators -- a must conference to attend to get active on a national level. Now, more than ever, amateur radio needs this great meeting of the minds, since it is important that we demonstrate a continued need for the frequency allocations we now have by pushing forward and documenting our achievements. The ARRL and TAPR Digital Communications Conference is one of the few ways to record our accomplishments and challenge each other to do more.

A Conference for the Beginner as well

The conference is not just for the digital expert. As in years past an entire session strand with beginning, intermediate, and advanced presentations on selected topics in digital communications will be offered. Some of the topics will include: APRS, Satellite Communications, TCP/IP, Digital Radio, Spread Spectrum and other introductory topics. Come to the conference and hear these topics presented by the experts!

Symposia, Seminars, Banquet

In addition to the presentation of papers on Saturday, three symposia/seminars will be held. These sessions are provided to allow those with additional time and interest to make the most of the Digital Communications Conference. For those who may have interest in just one symposium or seminar, registration for the conference is not required to attend these activities. This allows maximum flexibility for those who may want to participate during the Digital Communications Conference, but do not have an entire weekend to devote to the event.

The Third APRS National Symposium will be held on Friday and will be moderated by Steve Dimse, K4HG (the developer of javAPRS). It will likely include many APRS software authors, such as Bob Bruninga, WB4APR (the father of APRS), Keith Sproul, WU2Z, Mark Sproul, KB2ICI (the developers of MacAPRS and WinAPRS), Brent Hildebrand, KH2Z (the developer of APRSPLUS), Mike Musick, N0QBF (developer of PocketAPRS), and other nationally-known APRS leaders. Join this group for the afternoon and evening for in-depth discussions and presentations on the current and future status of APRS. This is a unique opportunity to gain insight into this fast-growing digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning System).

Starting late Friday afternoon, a half-day technical seminar will be held. In the past this seminar has covered topics such as RF, DSP, Advanced Networking Topologies and other stimulating topics.

On Saturday night the DCC Banquet will be held. This year the conference is proud to have Geoff Baehr, N6LXA, Sun Microsystems Chief Network Officer at the banquet to speak. Sun Microsystems has been doing some very exciting things in networking over the years and the talk should be an interesting one. After the banquet there will be time for special interest group gatherings.

The Sunday morning seminar will be focused on PIC development, design, and programming. This five-and-a-half hour seminar will focus on the things you need to know now in order to understand and begin to participate in PIC development. PIC processors are becoming very important in various project designs and implementations. This seminar will by presented by the TAPR PIC Development team.

Fourth Annual ARRL and TAPR DCC Student Papers Award

ARRL and TAPR especially welcome papers from full-time students to compete for the fourth annual student papers award. Two $500 travel awards may be given, one in each of the following categories: a) best technical/theory-oriented paper by a student, and b) best educational or community-oriented application paper by a student. The paper should relate directly to a wireless digital communication topic (see the guidelines for more information). Papers co-authored by educators or telecommunications professionals are also eligible for this award as long as a student is the first author. The deadline for receipt of finished student paper manuscript is July 10, 1999. Please note that this deadline is different from the general conference paper submission date. For full details and paper guidelines contact TAPR or browse to http://www.tapr.org/dcc.

Call for Conference Proceeding Papers

Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the conference is not required for publication. The primary purpose of the conference is to communicate ideas and techniques regarding digital communications. Papers written in an informal style are welcome, as well as those written to academic standards. If you know of someone who is doing great things with digital communications, be sure to tell them about this! Papers are due by August 9, 1999, and should be submitted to Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111, or via e-mail to lweinberg@arrl.org. The paper submission guidelines are available on-line (http://www.tapr.org/dcc).

International Co-Host

PRUG (Packet Radio User Group of Japan) will be the International co-host for a second year running. PRUG will be hosting an informal social Friday evening before their seminar and symposium is held. Visit http://www.prug.or.jp for more information about the organization.

What can you expect during the 1999 ARRL and TAPR Digital Communications Conference?

* A full day of papers, breakout sessions, and selected topics on Saturday for the beginner to advanced amateur digital enthusiast.

* Three seminars/symposia

    Friday (1 PM) - Third Annual APRS National Symposium, moderated by Steve Dimse, K4HG, featuring Bob Bruninga, WB4APR, Keith Sproul, WU2Z, Mark Sproul, KB2ICI, and Brent Hildebrand, KH2Z

    Friday (3 PM) - Technical Seminar TBD

    Sunday (8:30 AM) - PIC Development, Design, and Programming

* Fourth Annual Student Paper Awards.

* TAPR Membership Meeting

* A banquet with special guest speaker Geoff Baehr, N6LXA, Sun Microsystems Chief Network Officer.

* SIGs (Special Interest Groups) get-togethers on Saturday, following the banquet

* Informal get-togethers throughout the weekend

* A facility that is perfect for this type of conference

* Informal engineering discussions/demonstration areas

* An event at which the most important new developments in

  amateur digital communications are announced

* Digital 'movers and shakers' from all over the world in attendance

---

Conclusion

If you have attended a Digital Communications Conference in the past, remember how much fun it was discussing the latest developments into the wee hours! If you have never been to a Digital Communications Conference, then make your plans now to attend and find out how much fun they can be.

There are few activities where your participation can be so much fun and so important! You will be able to get together with colleagues from all over the world and bring each other up to date on your latest work. Experience all this and more for an unforgettable weekend of ham radio and digital communications. Make your travel and lodging arrangements now. We hope to see you at the ARRL and TAPR Digital Communications Conference, September 24-26!

Full information on the conference and hotel information can be obtained by contacting Tucson Amateur Packet Radio, 8987-309 E. Tanque Verde Road #337, Tucson, AZ 85749-9399, phone 940-383-0000, fax 940-566-2544, e-mail tapr@tapr.org, browse www.tapr.org/dcc.

Sincerely,
  Greg Jones, WD5IVD, TAPR Conference Chair
  Steve Stroh, N8GNJ, Conference Manager
  Dan Meredith, N7MRP, Local Host Liaison
  Keith Justice, KF7TP, Local Host Liaison

Note: If you need conference handouts or flyers for ham club meetings, contact TAPR to get what you need!

Hotel Information

Conference presentations, meetings, and seminars will be held at the Holiday Inn Select Airport. Special DCC rooms rates are $69/single and $79/double per night. When making reservations with the hotel, be sure to indicate you are attending the ARRL and TAPR DCC in order to get the discount. It is highly recommended that you book your room prior to arriving. A block of 75 rooms is reserved until August 22, 1999. After the 75 rooms are booked, rooms will only be available in nearby hotels, so be sure to book your rooms early! The hotel provides transportation to and from the Phoenix Sky Harbor International Airport. Please contact the hotel to arrange specific transportation needs.

   Holiday Inn Select Airport (conference hotel)
   4300 E Washington
   Phoenix, AZ 850234
   Phone 602-273-7778, fax 602-286-1109

Registration

Contact the TAPR office by phone, fax, or e-mail (numbers and addresses are above) to register or for additional meeting information. MasterCard and VISA are accepted.

- Preregistration (before Sept 1): $42.00 *

- Late registration or at door: $47.00 *

* - Conference registration includes Conference Proceedings, Saturday
    sessions/meetings, and lunch.

- Saturday Evening Dinner (limited space): $22.00 **

** - Includes dinner, speaker, prize drawing

Seminar/symposia

Note: You do not have to be registered for the conference to attend one
or more of the seminars/symposia.

- Friday, 1-8 PM, Third Annual APRS National Symposium (full day)

   Registration: $25***

- Friday 3-7 PM, Technical Seminar. TBD

   Registration $15***

Sunday 8:30-2 PM, PIC Development, Design, and Programming.
  Steve Bible, N7HPR, and the TAPR PIC Development team.

   Registration $20***

*** Cost of seminar or symposium includes the cost of handout
materials.

Contact TAPR to register for the DCC:

Tucson Amateur Packet Radio
8987-309 E. Tanque Verde Road #337
Tucson, AZ 85749-9399.
phone 940-383-0000, fax 940-566-2544
e-mail tapr@tapr.org, browse http://www.tapr.org

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
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May 1999

Original source file: tapr-bb.9905
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1999-05/TAPR-BB_1999-05.txt

1. [tapr-bb] Technology Demo Day (Update Announcement)

From: Greg Jones <wd5ivd@tapr.org>
Date: Wed, 5 May 1999 14:02:28 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-19268-1999.05.05-14.04.22--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

TAPR is proud to announce the first annual Technology Demo Day
sponsored by the TAPR APRS SIG.

The purpose of this event is to demonstrate technology independence at the
location of Field Day. Technologies like Packet Radio, SSTV, ATV, Spread
Spectrum, IGates and other operating modes accessed via RF means only will
be allowed, since this reflects current emergency situations at disaster
scenes in our present day world.

The 1999 Technology Demo Day is to coincide with the ARRL Field Day.

Full details are available at http://www.tapr.org/tdfd

1999 Technology Demo Day

* Commercial Power Restriction
  No commercial power is allowed for stations submitting a score.

* Band of operation:
  Any frequencies that are currently allowed for the mode in use. HF,
  VHF, etc

* Use of networks and digipeaters:
  Digipeaters, Networks, can be used for contacts
  All APRS paths allowed.
  Sites must use RF (No direct Inet)

* Participants:
  Any licensed amateur radio operator may participate.
  Particpants that are at a direct connection to the net can participate
  but are not permitted to submit scores.

* Operator Designations:
  Single Operator designated by "SO".
  Multi Operator by "MO"
  No Operator by "NO"

* Minimum exchange consists of:
  Call Sign, ARRL section, Operator Designation (SO, MO, NO)

* Submission of scores:
  Do not send your Logs. Send only your score.
  Send your score to kb2scs@worldnet.att.net or use
  http://www.tapr.org/tdfd
  Scores must be submitted within two weeks of the end of the event.

* Points:
    o 25 points for receiving the ARRL message in digital form

    o 2 points for every LIVE packet QSO (packet network, conference
      nodes, digis, etc)

    o 1 point for every APRS station "received"
    o 2 points for every APRS station exchanging messages

    o 25 points for receiving ATV signals from a range over 5 miles
    o 25 points for transmitting ATV to another station over 5 miles

    o 5 points for every received SSTV picture received
    o 5 points for every transmitted SSTV contact

```
        o 25 points for receiving any Satellite digital MESSAGE
        o 25 points for transmitting any Satellite digital Message.

        o 25 points for making a complete exchange using Spread Spectrum
        o 5 points for each Spread Spectrum contact thereafter


  ---------------------------------------------------------------------

Suggested Operating instructions

   * HOOK UP YOUR SPEAKER.
     If you aren't listening to the packets, then you may not know what is
     going on the channel. TNC's do not detect collisions. DCD's do not
     either, so just because the little green light is OFF, does not mean
     the channel is not all QRM
   * Operate normally.
     USE SHORT packets and MINIMUM PATH.
     Use WIDEN-N where possible.
     Keep hops practical for your area. (any more than 3 probably
     impossible)..
     Work everyone you see on mail/traffic pages.
   * ACKS are not required!
     If you get a QSL message from the other station, don't wait for an ACK.
     Erase the outgoing message to reduce QRM!
   * Internet Gateways
     The key here is that IGates only pass through MESSAGEs to LOCAL
     stations in their area. This means you can QSO with anyone if you
     already know their callsign! You will probably NOT see their posits
     since only messages go via IGates (normally). This is why you should
     always include your GRIDSQ in all of your text messages.
     Here are some ways we have come up with to get around these quirks for:
        * a) Assume an SSID of -6 for stations and guess at some
          APRS calls...
        * Watch your traffic list. As soon as anyone QSO's anyone in your
          area, you will see them for a return QSO.
        * Send a CQ FD MESSAGE with your GRIDSQ and report to a DIGI in a
          known area with an IGate. This will go through all IGates.
        * Do a MAPS-OVERLAY-DIGIS for an area to see a good target call.
          (See C)
        * Do NOT send CQFD or TARGET messages until you have exhausted all
          other contacts, else we may totally BLOCK the RF channels around
          IGates.
        * Once you are working via IGATES, PLEASE minimize your path to ONLY
          the hops needed to hit your local IGate.
        * Home Stations If you are not going to operate, please
          set up your UN-ATTENDED home station for AUTOREPLY with something
          like 'QSL. [gridsq].(NO), ARRL section, etc. For APRSdos this
          simply means send ONE message to the callsign of REPLY and make
          sure this message is the first in your SEND list.


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APRS® is registered to Bob Bruninga, WB4APR.
--------------------------------------------------------------------------
Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
--------------------------------------------------------------------------
e-mail: tapr@tapr.org       web: <http://www.tapr.org/>
ftp:    ftp.tapr.org
phone:  940-383-0000        fax: 940-565-2544
--------------------------------------------------------------------------

-----
Greg Jones, WD5IVD                 Austin, Texas
wd5ivd@tapr.org      http://www.tapr.org/~wd5ivd



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To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org
```

2. [tapr-bb] TAPR Dayton Activities 1999

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 11 May 1999 21:54:45 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>

Message-ID: <LYR818-20436-1999.05.11-22.32.47--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

TAPR Dayton Activities 1999
for details visit: http://www.tapr.org/tapr/html/Fdayton.html

We will be at our normal booth spaces (542 & 543)
Come on by and say hi!

Friday Morning - TAPR Digital Forum
Friday Evening - TAPR PACK*BASH

TAPR Digital Forum on Friday

The schedule for the TAPR digital forum is:

10:00 - 10:05am (5 min)
Introduction to Forum, John Ackermann, N8UR

10:05 - 10:30am (25min)
TAPR Update, Greg Jones, WD5IVD

10:30 - 11:00am (30 min)
Linux AX.25 Update, John Ackermann, N8UR

11:00 - 11:30am (30 min)
PIC Development Update, Steve Bible, N7HPR and John Hansen, W2FS

11:30 - 12:00noon (30 min)
GPS Projects, Steve Bible, N7HPR

12:00noon - 12:30pm (30 min)
Compact Flash Card Project, John Koster, W9DDD

12:30 - 1:00pm (30 min)
TAPR APRS News, Steve Dimse, K4HG and Stan Horzepa, WA1LOU

1:00pm - 1:45pm (45 min)
FHSS Radio Project Update, Tom McDermott, N5EG

Attending the 1999 Dayton Hamvention? Then don't miss out on PACK*BASH!

What?

An event for the digitally-inclined ham, featuring:

* Buffet dinner
* "A Little Technology Goes a Long Way" -- Keynote address
  by Dave Pederson, N7BHC
* TAPR special interest group meetings
* "Birds of a Feather" gatherings

When?

Friday evening, May 14, 1999
Doors open at 7:00 pm; dinner served at 7:30 pm
Speaker and meetings after dinner

Where?

NCR "Sugarcamp" Conference Center, 101 W. Schantz Ave. --
South of downtown Dayton, just west of Main St. (Rt 48).
Maps available on the TAPR web site (www.tapr.org) or at the
TAPR booth.

How?

Dinner requires advance registration and payment through TAPR.
Tickets will be available at the TAPR booth on Friday. The cost
is $20.00 per person, tax and tip included.

All amateurs are welcome to attend, enjoy the speaker, and
particpate in the meetings, although only those purchasing a
dinner can eat.

Who?

PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet
Radio, the national leader in digital communication -- and the
Miami Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to
http://www.tapr.org/tapr/html/dayton.html,
or send email to tapr@tapr.org.

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

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To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

3. [tapr-bb] General Announcement APRS Working Group (APRS-WG)

From: Greg Jones <wd5ivd@tapr.org>
Date: Mon, 17 May 1999 10:29:10 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-21126-1999.05.17-10.33.56--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

General Announcement regarding the formation of the
APRS Working Group (APRS-WG)

As a result of the dialog held among the primary authors of APRS, the APRS
Working Group (APRS-WG) is being founded to aid with the development and
growth of APRS. What follows is information on the APRS-WG and initial
plans for the next eight months. As promised in the initial agreement
between the authors this announcement covers the substantive outcomes that
have occurred in private on-line discussion and at the in-person meeting
held on May 1-2, 1999.

The APRS-WG would like to thank all those involved and the APRS community
as a whole for allowing this process to happen in the manner that it did.
The results we fell will benefit the APRS community as a whole.

Greg Jones, WD5IVD
for the APRS Working Group

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APRS Working Group

Mission Statement

APRS, developed by Bob Bruninga, WB4APR, is an Amateur Radio digital
infrastructure for realtime and tactical digital communications. It is
designed to provide communications during emergencies, but it is recognized
to support routine round-the-clock global communications as well. Its
applications include mapping, messaging, telemetry, and tracking. It uses
a standard protocol over RF links, supplemented by alternate communication
methodologies.

The APRS Working Group

The APRS Working Group ("Group)" is an unincorporated association whose
members undertake to further the use and enhance the value of the APRS
protocols by (a) maintaining and publishing a formal APRS Protocol
Specification; (b) publishing validation tests and other tools to enable
compliance with the Specification; (c) supporting an APRS Certification
program; and (d) generally working to improve the capabilities of APRS
within the Amateur Radio community. This document describes the
organization and operation of the Group.
Although the Group may receive support from TAPR or other organizations, it
is an independent body and is not affiliated with any organization. The
Group will have no budget, collect no dues, and own no assets.

Statement of Principles

At a meeting near Baltimore, Maryland on May 1-2, 1999, and in email
communications in the days following, the Group members agreed to the
following principles that will govern their behavior and that of the Group:

1. Bob Bruninga has been the primary developer of the APRS concept. He owns the APRSdos computer program, the APRSdos documentation, and the APRS trademark, and retains the right to license these items to others.

2. All Group members agree that in the spirit of Amateur Radio, the on-air protocols themselves should be open to general Amateur Radio development and not be restricted by copyright.

2. Existing agreements between or among APRS developers are unaffected by this Charter.

3. The Group will formalize the APRS on-air Protocol Specification and publish a definitive APRS protocol document. Present plans are to make the specification in book and diskette form, and possibly to provide it via electronic distribution.

4. A process will be put in place to define how changes to the protocol specification are made, and that process will permit input, review, and comment by the Amateur Radio public.

5. The Group will put a voluntary APRS certification process in place, to be managed by Bob Bruninga with Group oversight. The process will include a publicly available validation suite.

Protocol Committee

The APRS Protocol Specification is the formal definition of the data elements and message formats used to communicate between APRS devices via wireless or wired (e.g., Internet) connections. It does not include user interface or other elements that do not affect the content or format of these interface components.

The Protocol Committee, which presently consists of all APRS-WG Members, is responsible for the APRS Protocol Specification. It manages the process for publishing and updating the Specification, and for receiving public comment on proposed changes.

The Protocol Committee intends to publish Version 1.0 of the APRS Protocol Specification by the end of October 1999. The first draft of the Specification will be made available to the Amateur Radio community by the end of June 1999, and comments will be accepted as defined below.

Committee Operations and Community Input
Input from the APRS user community, other APRS developers, and the amateur community at large is a key component of the protocol development process. Once the process has been formally defined it will be announced and published.

Certification Committee

The Group wants to encourage the development of products that properly implement the APRS protocols. To that end, the Certification Committee, which is initially composed of all Group members, will establish a Certification Program. Certification is wholly voluntary on the part of an APRS product developer, and the Certification Program is available on an equal basis to any developer.
The full certification process and schedule will be announced and published shortly after Dayton. Some of the points of certification include:

1. The Committee will develop and approve a Validation Suite, which will be the primary basis for Certification. The Suite will consist of test inputs and a description of how a product complying with the Protocol Specification should react to each of these inputs. The suite will be based on the TAPR TNC-2 packet display format. The Validation Suite will be made available to the public without charge.

2. Bob Bruninga will manage the Certification Program on behalf of the Committee, subject to oversight by the Committee.

3. Subject to compliance with a Certification Agreement that must be signed before Certification is granted, Certified Products will be permitted to display or be advertised in conjunction with an "APRS Certified" trademark and logo. The trademark and logo are owned by Bob Bruninga and are licensed subject to the Certification Agreement.

4. Certified Products must successfully complete the Validation Suite, but

applicants must acknowledge that additional testing may be necessary to
ensure that a given Product properly implements the Protocol Specification,
and agree to reasonably cooperate with such testing.

5. The Certification process is largely self-managed. The applicant must
run the validation suite and submit results with the application. The
Committee will conduct such testing as it deems necessary to verify the
Product's conformance to the Protocol Specification.

Full details regarding membership to APRS-WG, meeting and voting process,
protocol committee, and the certification process will be made available
once the rules have been fully developed.

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4. [tapr-bb] 1999 TAPR Digital Forum @ HamVention

From: Greg Jones <wd5ivd@tapr.org>
Date: Mon, 31 May 1999 13:14:11 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-23578-1999.05.31-13.20.10--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The audio from the TAPR Digital Forum held during the 1999 Dayton
Hamvention is now available for listening. If you couldn't make the forum
this year, you can catch up on all the talks.

http://www.tapr.org/tapr/html/Fdayton99.html

Welcome to the TAPR Digital Forum
              John Ackermann, AG9V, Forum Moderator

TAPR Kit/Project/Organizational Update
              Greg Jones, WD5IVD (www)

Linux AX.25
              John Ackermann, N8UR

PIC-E Developments
              Steve Bible, N7HPR (www) and John Hanson, W2FS

GPS Projects
              Steve Bible, N7HPR (www)

Compact Flash Adapter
              John Koster, W9DDD

APRS Update
              Steve Dimse, K4HG and Stan Horzepa, WA1LOU

TAPR 900Mhz FHSS Radio Project
              Tom McDermott, N5EG

in addition Dave Pedersen, N7BHC, talk on "A Little Technology Goes a Long
Way" during the TAPR PacketBASH on Friday is available.

Cheers - Greg Jones, WD5IVD

Tucson Amateur Packet Radio
8987-309 E Tanque Verde Rd #337 * Tucson, Az * 85749-9399
----
e-mail: tapr@tapr.org   web: <http://www.tapr.org/>
ftp: ftp.tapr.org
phone: 940-383-0000   fax: 940-565-2544

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June 1999

Original source file: tapr-bb.9906
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1999-06/TAPR-BB_1999-06.txt

1. [tapr-bb] CLOVER Inventor, Ray Petit, W7GHM, SK

From: Greg Jones <wd5ivd@tapr.org>
Date: Fri, 18 Jun 1999 17:31:22 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Cc: "HF SIG list mailing"<hfsig@tapr.org>
Message-ID: <LYR818-26498-1999.06.18-17.39.46--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

```
SB SPCL @ ARL $ARLX003
ARLX003 CLOVER Inventor, Ray Petit, W7GHM, SK

ZCZC AX03
QST de W1AW
Special Bulletin 3  ARLX003
>From ARRL Headquarters
Newington CT  June 18, 1999
To all radio amateurs

SB SPCL ARL ARLX003
ARLX003 CLOVER Inventor, Ray Petit, W7GHM, SK

CLOVER inventor Ray Petit, W7GHM, died June 13, 1999, at his home in
Oak Harbor, Washington. He was 55. According to his close friend Ed
Bixby, AK0X, Petit suffered a stroke in early March caused by a
brain tumor that left him mostly paralyzed. Continuing growth of the
tumor resulted in additional strokes that finally took his life.

CLOVER is a digital communications protocol designed for use on the
HF bands that's found wide application in commercial and amateur
communication.

Petit was well-known and respected within the Amateur Radio digital
community. ''Ray was a real gentleman and he will be missed,'' said
QST Digital Dimensions Editor Stan Horzepa, WA1LOU. An ARRL member
for more than 27 years, Petit had authored several articles for QST
and QEX on CLOVER and coherent CW, among other topics.

Petit is survived by his wife, Joyce, two brothers and a sister.
NNNN
/EX
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Greg Jones, WD5IVD                Austin, Texas
wd5ivd@tapr.org      http://www.tapr.org/~wd5ivd



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July 1999

Original source file: tapr-bb.9907
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1999-07/TAPR-BB_1999-07.txt

1. [tapr-bb] 1999 ARRL and TAPR Digital Communications Conference

From: Greg Jones <wd5ivd@tapr.org>
Date: Thu, 1 Jul 1999 13:49:40 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-28270-1999.07.01-14.07.49--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

1999 ARRL and TAPR Digital Communications Conference
September 24-26, 1999
Phoenix, Arizona

Web: http://www.tapr.org/dcc

It's that time again! Time to start making your travel plans and thinking about what to publish for the upcoming 18th Annual ARRL and TAPR Digital Communications Conference.

The ARRL and TAPR Digital Communications Conference is an international forum for radio amateurs in digital communications, networking, and related technologies to meet, publish their work, and present new ideas and techniques for discussion. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. The Digital Communications Conference is not just for the digital expert, but for digitally-oriented amateurs of all levels of experience.

The 1999 ARRL and TAPR Digital Communications Conference will be held September 24-26, 1999 in Phoenix, Arizona. This year's conference location is just minutes away from the Phoenix Sky Harbor International Airport (PHX).

Not only is the Digital Communications Conference technically stimulating, it is a weekend of fun for all who have more than a casual interest in any of the ham digital communications modes. This includes networkers, sysops, software writers, modem designers, and digital satellite communications enthusiasts. The ARRL and TAPR Digital Communications Conference is for all levels of digital operators -- a must conference to attend to get active on a national level. Now, more than ever, amateur radio needs this great meeting of the minds, since it is important that we demonstrate a continued need for the frequency allocations we now have by pushing forward and documenting our achievements. The ARRL and TAPR Digital Communications Conference is one of the few ways to record our accomplishments and challenge each other to do more.

A Conference for the Beginner as well

The conference is not just for the digital expert. As in years past an entire session strand with beginning, intermediate, and advanced presentations on selected topics in digital communications will be offered. Some of the topics will include: APRS, Satellite Communications, TCP/IP, Digital Radio, Spread Spectrum and other introductory topics. Come to the conference and hear these topics presented by the experts!

Symposia, Seminars, Banquet

In addition to the presentation of papers on Saturday, three symposia/seminars will be held. These sessions are provided to allow those with additional time and interest to make the most of the Digital Communications Conference. For those who may have interest in just one symposium or seminar, registration for the conference is not required to attend these activities. This allows maximum flexibility for those who may want to participate during the Digital Communications Conference, but do not have an entire weekend to devote to the event.

The Third APRS National Symposium will be held on Friday and will be moderated by Steve Dimse, K4HG (the developer of javAPRS). It will likely include many APRS software authors, such as Bob Bruninga, WB4APR (the father of APRS), Keith Sproul, WU2Z, Mark Sproul, KB2ICI (the developers of MacAPRS and WinAPRS), Brent Hildebrand, KH2Z (the developer of APRSPLUS), Mike Musick, N0QBF (developer of PocketAPRS), and other nationally-known APRS leaders. Join this group for the afternoon and evening for in-depth discussions and presentations on the current and future status of APRS. This is a unique opportunity to gain insight into this fast-growing digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning System).

Starting late Friday afternoon, a technical seminar will be conducted by Allen Finne, KB5SQK, on High-Definition Television (HDTV). Allen is currently the chief engineer for Little Rock's FOX 16 KLRT as well as for UP 38 KASN. Allen will be discussing DTV (Digital Television) Implementation by Broadcasters during this two hour talk.

On Saturday night the DCC Banquet will be held. This year the conference is proud to have Geoff Baehr, N6LXA, Sun Microsystems Chief Network Officer at the banquet to speak. Sun Microsystems has been doing some very exciting things in networking over the years and the talk should be an interesting one. After the banquet, there will be time for special interest group gatherings.

The Sunday morning seminar will be focused on PIC development, design, and programming. This five-and-a-half hour seminar will focus on the things you need to know now in order to understand and begin to participate in PIC development. PIC processors are becoming very important in various project designs and implementations. This seminar will be presented by the TAPR PIC Development team.

Fourth Annual ARRL and TAPR DCC Student Papers Award

ARRL and TAPR especially welcome papers from full-time students to compete for the fourth annual student papers award. Two $500 travel awards may be given, one in each of the following categories: a) best technical/theory-oriented paper by a student, and b) best educational or community-oriented application paper by a student. The paper should relate directly to a wireless digital communication topic (see the guidelines for more information). Papers co-authored by educators or telecommunications professionals are also eligible for this award as long as a student is the first author. The deadline for receipt of finished student paper manuscript is July 10, 1999. Please note that this deadline is different from the general conference paper submission date. For full details and paper guidelines contact TAPR or browse to http://www.tapr.org/dcc.

Call for Conference Proceeding Papers

Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the conference is not required for publication. The primary purpose of the conference is to communicate ideas and techniques regarding digital communications. Papers written in an informal style are welcome, as well as those written to academic standards. If you know of someone who is doing great things with digital communications, be sure to tell them about this! Papers are due by August 9, 1999, and should be submitted to Maty Weinberg, ARRL, 225 Main Street, Newington, CT 06111, or via e-mail to lweinberg@arrl.org. The paper submission guidelines are available on-line (http://www.tapr.org/dcc).

Local/International Co-Host

The 1999 ARRL and TAPR Digital Communications Conference will be co-hosted by the Motorola Amateur Radio Club of Arizona (MARCA). MARCA is one of eight Motorola radio clubs located around the world. For the past couple of years, MARCA has been the primary driver of APRS in Arizona. The club maintains two WIDE
digipeaters that cover the Phoenix metropolitan area, and is working with other

clubs to expand the network into Tucson and other parts of the state.
In addition, MARCA recently took over the sites of the Arizona Network
Intertie
Group to continue support for the packet network in Arizona. For more
information on MARCA, please contact David McCarthy, KC7AYX, at
rxyh90@email.sps.mot.com

PRUG (Packet Radio User Group of Japan) will be the International co-host
for a second year running. PRUG will be hosting an informal
social Friday evening before their seminar and symposium is held.
Visit http://www.prug.or.jp for more information about the
organization.

What can you expect during the 1999 ARRL and TAPR Digital
Communications Conference?

* A full day of papers, breakout sessions, and selected topics on
  Saturday for the beginner to advanced amateur digital enthusiast.

* Three seminars/symposia

     Friday (1 PM) - Third Annual APRS National Symposium,
        moderated by Steve Dimse, K4HG, featuring Bob Bruninga,
        WB4APR, Keith Sproul, WU2Z, Mark Sproul, KB2ICI, and
        Brent Hildebrand, KH2Z

     Friday (5 PM) - Technical Seminar on High-Definition TV (HDTV)

     Sunday (8:30 AM) - PIC Development, Design, and Programming

* Fourth Annual Student Paper Awards.

* TAPR Membership Meeting

* A banquet with special guest speaker Geoff Baehr, N6LXA, Sun
  Microsystems Chief Network Officer.

* SIGs (Special Interest Groups) get-togethers on Saturday, following
  the banquet

* Informal get-togethers throughout the weekend

* A facility that is perfect for this type of conference

* Informal engineering discussions/demonstration areas

* An event at which the most important new developments in
  amateur digital communications are announced

* Digital 'movers and shakers' from all over the world in attendance

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Conclusion

If you have attended a Digital Communications Conference in the past,
remember how much fun it was discussing the latest developments
into the wee hours! If you have never been to a Digital
Communications Conference, then make your plans now to attend
and find out how much fun they can be.

There are few activities where your participation can be so much fun
and so important! You will be able to get together with colleagues from
all over the world and bring each other up to date on your latest work.
Experience all this and more for an unforgettable weekend of ham
radio and digital communications. Make your travel and lodging
arrangements now. We hope to see you at the ARRL and TAPR
Digital Communications Conference, September 24-26!

Full information on the conference and hotel information can be
obtained by contacting Tucson Amateur Packet Radio, 8987-309 E.

Tanque Verde Road #337, Tucson, AZ 85749-9399, phone 940-383-0000,
fax 940-566-2544, e-mail tapr@tapr.org, browse www.tapr.org/dcc.

Sincerely,
  Greg Jones, WD5IVD, TAPR Conference Chair
  Steve Stroh, N8GNJ, Conference Manager
  Dan Meredith, N7MRP, Local Host Liaison
  Keith Justice, KF7TP, Local Host Liaison

Note: If you need conference handouts or flyers for ham club meetings,
contact TAPR to get what you need!

Hotel Information
Conference presentations, meetings, and seminars will be held at the
Holiday Inn Select Airport. Special DCC rooms rates are $69/single
and $79/double per night. When making reservations with the hotel,
be sure to indicate you are attending the ARRL and TAPR DCC in
order to get the discount. It is highly recommended that you book
your room prior to arriving. A block of 75 rooms is reserved until
August 22, 1999. After the 75 rooms are booked, rooms will only be
available in nearby hotels, so be sure to book your rooms early! The
hotel provides transportation to and from the Phoenix Sky Harbor
International Airport. Please contact the hotel to arrange specific
transportation needs.

   Holiday Inn Select Airport (conference hotel)
   4300 E Washington
   Phoenix, AZ 85034
   Phone 602-273-7778, fax 602-286-1109

Registration

Contact the TAPR office by phone, fax, or e-mail (numbers and
addresses are above) to register or for additional meeting information.
MasterCard and VISA are accepted.

- Preregistration (before Sept 1): $42.00 *

- Late registration or at door: $47.00 *

* - Conference registration includes Conference Proceedings, Saturday
    sessions/meetings, and lunch.

- Saturday Evening Dinner (limited space): $22.00 **

** - Includes dinner, speaker, prize drawing

Seminar/symposia

Note: You do not have to be registered for the conference to attend one
or more of the seminars/symposia.

- Friday, 1-7 PM, Third Annual APRS National Symposium (full day)

   Registration: $25***

- Friday 5-7 PM, Technical Seminar High-Definition Television (HDTV)
     Allen Finne, KB5SQK

   Registration $15***

Sunday 8:30-2 PM, PIC Development, Design, and Programming.
  Steve Bible, N7HPR, and the TAPR PIC Development team.

   Registration $20***

*** Cost of seminar or symposium includes the cost of handout
materials.

Contact TAPR to register for the DCC:

Tucson Amateur Packet Radio
8987-309 E. Tanque Verde Road #337
Tucson, AZ 85749-9399.
phone 940-383-0000, fax 940-566-2544
e-mail tapr@tapr.org, browse http://www.tapr.org

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

October 1999

Original source file: tapr-bb.9910
Source: https://archive.org/details/tapr-1997
Recovered from: https://archive.org/download/TAPR-BB_1999-10/TAPR-BB_1999-10.txt

1. [tapr-bb] Nominations Sought for TAPR Board of Directors

From: Greg Jones <wd5ivd@tapr.org>
Date: Tue, 5 Oct 1999 19:10:43 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-43549-1999.10.05-19.34.41--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Nominations Sought for TAPR Board of Directors

Tucson Amateur Packet Radio is incorporated in the State of Arizona as a non-profit scientific and educational institution. It is recognized by the IRS as a 501(c)3 tax-exempt organization for these same purposes. TAPR is governed by a 9-member Board of Directors. Each member of the Board serves a three year term. Every year three positions are up for election.

Board members are expected to attend two board meetings held in conjunction with the Dayton Hamvention and the ARRL and TAPR Digital Communications Conference. They participate in the decision-making process and provide guidance to the officers. They receive no pay and must defray most of their own expenses to attend meetings. Board members should be prepared to be active in the continuing Board deliberations, which are conducted via the Internet. Active participation in TAPR activities by Board members is important to the furtherance of the objectives of TAPR. The officers of TAPR are elected by the members of the Board at the annual Board of Directors meeting.

The current members of the Board of Directors and their expiration dates of their terms are:

*	Greg Jones, WD5IVD	2000	President
*	John Koster, W9DDD	2000	
*	Mel Whitten, K0PFX	2000	
	John Ackermann, N8UR	2001	Vice President
	Jim Neely, WA5LHS	2001	Treasurer
	Barry McLarnon, VE3JF	2001	
	Steve Bible, N7HPR	2002	
	Steve Dimse, K4HG	2002	
	Bob Hansen, N2GDE	2002	PSR Editor

Nominations are now open for seats expiring in March 2000 (marked with an asterisk).

To place a person in nomination, please remember that he or she must be a member of TAPR. Confirm that the individual is willing to have their name placed in nomination. Send that person's name (or your own if you wish to nominate yourself) along with your call and their call, telephone numbers, mailing address, and Internet address. The person nominated should submit a short biographical sketch to be published along with the ballot.

Nominations and biographical sketches should be submitted to the TAPR office no later than December 15th, 1999.

Ballots will be mailed in January. TAPR will again use an Internet ballot in conjuction with a letter about the balloting. Results will be announced on March 30th, 1999.

Responsibilities of a board member include:

1) Attendance at both board meetings each year.
2) Regular participation with the continuous session of the board (currently held over the Internet). Typically this requires a minimum of 3 hours a week, although sometimes much more is required during active board discussions.
3) Participation with TAPR projects as volunteered. Board members, while not required, are involved with various project management, ongoing organization and/or supervision/liaison positions. Active board participation with various projects make many of the most important projects and tasks possible. Board members are expected to take an active part in TAPR in some form.

All nominated members will be placed on the ballot and the highest vote receivers will be placed in the open board positions. If elected, two

board meetings in 1998 will be held. One will be during Dayton Hamvention
and the other during the ARRL and TAPR Digital Communications Conference.
All directors shall serve for a term of three years.

Greg Jones, WD5IVD   Austin, Texas
wd5ivd@tapr.org   http://www.tapr.org/~wd5ivd

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2. [tapr-bb] DCC recap

From: Greg Jones <wd5ivd@tapr.org>
Date: Thu, 14 Oct 1999 13:03:39 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Cc: "HF SIG list   mailing"<hfsig@tapr.org>, " Spread Spectrum "<ss@tapr.org>,
        " TAPR/AMSAT DSP "<dsp@tapr.org>,
        "APRS SIG list   mailing"<aprssig@tapr.org>,
        "NETSIG list   mailing"<netsig@tapr.org>,
        "BBS SIG list   mailing"<bbssig@tapr.org>,
        " tacgps "<tacgps@tapr.org>, aprsnews@tapr.org, mic-e@tapr.org,
        TAPR Regional Freq <regional_freq@tapr.org>
Message-ID: <LYR818-44938-1999.10.14-13.16.45--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

1999 ARRL and TAPR Digital Communications Conference
September 24-26, 1999
Phoenix, Arizona
Greg Jones, WD5IVD

Another grand Digital Communications Conference! Special thanks go out to
the workers at MARC for hosting locally and to PRUG for being our
international co-host again. Also, a very special thanks to Geoff Baehr,
N6LXA, Chief Network Officer of Sun Microsystems, for attending and giving
the dinner talk on Saturday.   Steve Stroh, N8GNJ, and Tina Stroh did an
excellent job in working the arrangements with the hotel in Phoenix once it
was selected. Tina wasn't able to attend because they are in the midst of
adopting a child. Congratualtions to Tina and Steve. Sheila Bible was a
big help and will be working with Tina in the coming years to help
coordinate the conferences as I take a lesser role in the conference. As
in the past, audio and photos from the conference will be available on the
TAPR web site (http://www.tapr.org/dcc).

Next year's DCC will be hosted in Orlando, FL. The date of the conference
should be selected by the end of the year.

The conference started Friday afternoon with the third annual APRS National
Symposium moderated by Steve Dimse, K4HG. The symposium was full of talks
and projects. During the symposium yet another new mystery hardware
project was discussed. This years was a sneak preview provided by Kenwood
to all those attending the DCC of their new mobile APRS equipped radio.
The following people spoke at the APRS Symposium.

APRSdos and TrakNet update
        Bob Bruninga, WB4APR
MacAPRS/WinAPRS Update
        Keith Sproul, WU2Z
XAPRS
        Keith Sproul, WU2Z
APRS+SA Update
        Brent Hildebrant, KH2Z
Internet and APRS
        Steve Dimse, K4HG
WinCE version
        Rob Wittner, KZ5RW
Kenwood TH-D7 Tricks, Treats, and Tragedies
        Stan Horzepa, WA1LOU
Arizona APRS
        David McCarthy, KC7AYX
APRS ICQ
        Tom Schaefer, NY4I
Microcontrollers and APRS
        Steve Bible, N7HPR
APRS Working Group Update
        John Ackermann, N8UR

The Friday Technical Seminar on HDTV by Allen Finne, KB5SQK was cancelled at the last minute when Allen cound not attend.

Friday night saw the annual DCC social, which was sponsored by PRUG. After the social, PRUG presented a technical paper highlighting their current development. The papers focused on what had been happening with their prototype direct-sequence radio operating in the 2.4 GHz band. This prototype appears to be very well designed from an experimentation point of view.

As with past years, Saturday was split into two strands -- a paper session and a session featuring selected topics. As in previous years, the selected topic strand had fewer topics with more time to present. Four selected topics were presented. Steve Bible, N7HPR, presented an introduction to PICs. Guy Story, KC5GOI, presented an overview to APRS and discussed some of the latest happenings in the mode. Johan Forrer, KC7WW, did an overview and current status on HF communications. Bob Nielsen, W6SWE, did a talk on the current status of Linux in the amateur community. Thanks to all the selected topic speakers for taking the time to present more in-depth materials during the DCC.

The paper sessions included the following talks:
Regulatory Issue and Update
        Dewayne Hendricks, WA8DZP
ARRL Technology Task Force & The Technology Working Group
        Rich Moseson, W2VU
Arizona Packet Radio, Past Present and Future
        Keith Justice, KF7TP & Dan Meredith, N7MRP
APRS Mic-Lite
        Bob Bruninga, WB4APR
APRS for X-Windows (Linux)
        Keith Sproul, WU2Z
Automatic Weather Bulletins via APRS
        Keith Sproul, WU2Z
APRS Generic Digipeating Satellites for HT and Mobile Satellite Communications
        Bob Bruninga, WB4APR
XML and APRS
        Steve Dimse, K4HG
APRN: Automatic Picture Relay Network and SSTV Picture Server
        Keith Sproul, WU2Z & Bob Bruninga, WB4APR
APRS Stand Alone Message Receiver
        Keith Sproul, WU2Z
Proposal for a Spread Spectrum Transponder Payload on the International Space Station
        Matthew Ettus, N2MJI
UWB (Ultra Wide Band) Technology
        Dewayne Hendricks, WA8DZP
Status Report on TAPR 900MHz SS Radio Project
        Tom McDermott, N5EG
A Low-Cost HF Channel Simulator for Testing and Evaluating HF Digital Systems
        Johan Forrer, KC7WW
(Non Technical) Lessons to be learned from the PSK31 Phenomena
        Eduardo Jacob, EA2BAJ
A software Implementation for Federal Standard 1052 (Mil. Std. 188-110A HF Modems)
        Robert McGwier, N4HY
A Practical Approach to Implementing HF Digital Voice in the Amateur Service
        Charles Brain, G4GUO
HamWeb and HamStation
        Dale Puckett, K0HYD

For the banquet speaker, we were very fortunate to have Geoff Baehr, N6LXA, Chief Network Officer of Sun Microsystems. Geoff gave a very interesting and thought-provoking talk on the future of the Internet and networking in general and gave some comments on the future of amateur radio. We were very fortunate to have Geoff attend the conference and much thanks goes to Dewayne Hendricks, WA8DZP, for helping arrange another good banquet talk.

The Sunday morning seminar was a more time-intensive version of last year's introductory session on PIC development. Steve Bible, N7HPR, Steve Dimse, K4HG, John Hansen, W2FS, and Byon Garrabrant, N6BG gave a 5 hour long seminar on PIC development and programming issues. They showed lots of interesting projects and answered a lot of questions from the audience.

Thanks to all those that I missed mentioning who helped with the DCC and I look forward to seeing you next year!

Tucson Amateur Packet Radio

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e-mail: tapr@tapr.org web: <http://www.tapr.org/>
ftp: ftp.tapr.org
phone: 940-383-0000 fax: 940-565-2544

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To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

3. [tapr-bb] A "Thank You" to TAPR from Kenwood Communications Corporation

From: Greg Jones <wd5ivd@tapr.org>
Date: Fri, 15 Oct 1999 12:39:13 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-45128-1999.10.15-12.54.15--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

A "Thank You" to TAPR

Kenwood Communications Corporation would like to thank each member of TAPR.
Our thanks are not only for purchasing so many of our radios, but also for
what TAPR represents to the future of the entire Amateur Radio community.
Kenwood will do it's best to listen to you for new ideas and opportunities
to help create your visions into the highest quality, state of the art,
Amateur radios made anywhere in the world.

TAPR is what Amateur radio is all about. Over the past +100 years of
Amateur radio, many things have changed. The technologies have grown and
the users needs are constantly changing. The spirit that lived within the
founders, Marconi, Maxim and others who helped to seed the imaginations for
other experimenters to design, build, and improve ideas is alive in TAPR.
Today we have a world full of wireless communications that society takes
for granted. Without Amateur experimenters we might still be only dreaming
of talking across the oceans. We might never have heard Neil Armstrong's
famous words, "One small step for man, one giant leap for mankind."
Amateurs made wireless communications what it is today!

TAPR is a special organization, of which, each of you should be proud to
belong. Your mission is clear and your goal is pure in character and
meaning. In many ways, Kenwood thinks of TAPR members as the "Green Beret"
or "Samurai" of Amateur Radio.

Don't ever forget your focus and your meaning as an organization. Thank you
for helping to keep the spirit and the fun of Amateur radio alive and well
forever.

73'

Kenwood Communications Corporation
September 24, 1999

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

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To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

December 1999

Original source file: tapr-bb.9912
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/tapr-bb/tapr-bb.9912

1. [tapr-bb] APRS Protocol Spec Final Draft Published!

From: Greg Jones <wd5ivd@tapr.org>
Date: Sat, 4 Dec 1999 22:39:34 -0600
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-53299-1999.12.04-22.54.06--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

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==========================
APRS PROTOCOL SPECIFICATION
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TAPR announces release of the second public draft of
the APRS Protocol Specification.
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It's finally here! The APRS Working Group has completed the second
public draft of the APRS Protocol Specification.

This document covers the core functionality of APRS Protocol Version
1.0 as it works today. This is the base level specification that all
implementations should comply with, and it was unanimously adopted by
the Working Group members, who include the authors of APRS-DOS,
WinAPRS, MacAPRS, X-APRS, PocketAPRS, APRS+SA, javAPRS, and APRServe,
and the developers of the Mic-E and Pic-E products.

The Specification forms the basis for future Working Group projects,
including APRS test suites and the APRS Certification Program.  The
WG also hopes to use this document as the basis for further speci-
fications, including IGate and APRS digipeater operation.

Over the last 8 weeks the specification has grown from 18 pages to 93.
It now includes packet format diagrams, the APRS symbol tables, full
details of the Mic-E encoded format, the compressed lat/long position
format, plus weather report and telemetry formats. Above all, the
specification contains many examples of how APRS data is formatted to
make it easier to understand.

The APRS Protocol Specification is now available on the APRS Working
Group web page at: http://www.tapr.org/tapr/html/Faprswg.html.

It is available in PDF format, both zipped and unzipped.  The zip file
is
a little under 1.5MB.  You can read it with a PDF reader such as Adobe
Acrobat 3 or 4.

This document is still a draft. There will now be a 15-day public
discussion period in which anyone may feed back comments, criticisms
and suggestions for improvement. Full information on how to do this is
contained within the document.

The final cutoff for comment is midnight U.S. Pacific time on Sunday 19
December (i.e. 0800 UTC on Monday 20 December).

After this date the Working Group will consider all the comments, and
will issue the final approved version of the Specification as soon as
possible thereafter.

John Ackermann, N8UR (jra@febo.com)
Administrative Chair
APRS Working Group
4 December 1999


--------------------------------------------------------------------------
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ftp:    ftp.tapr.org
phone:  940-383-0000        fax: 940-565-2544
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2. [tapr-bb] Amateur Radio changes to Part 97

From: Greg Jones <wd5ivd@tapr.org>
Date: Thu, 30 Dec 1999 16:09:57 -0600
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-57324-1999.12.30-16.29.24--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

http://www.fcc.gov/Daily_Releases/Daily_Business/1999/db991230/fcc99412.txt

Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	WT Docket No. 98-143
1998 Biennial Regulatory Review --	)	RM-9148
Amendment of Part 97 of the Commission's	)	RM-9150
Amateur Service Rules.	)	RM-9196

REPORT AND ORDER

Adopted: December 22, 1999 Released: December 30, 1999

Date: Thu, 30 Dec 1999 16:39:54 -0500
From: "ARRL Letter distribution list" <letter-dlvy@p1k.arrl.org>

Amateur Restructuring is Here: Three License Classes, One Code Speed

NEWINGTON, CT, Dec 30, 1999--Amateur Radio will get a new look in the new millennium. The FCC today issued its long-awaited Report and Order in the 1998 Biennial Regulatory Review of Part 97--more commonly known as "license restructuring." The bottom line is that starting April 15, 2000, there will be three license classes--Technician, General, and Amateur Extra--and a single Morse code requirement--5 WPM.

"We believe that an individual's ability to demonstrate increased Morse code proficiency is not necessarily indicative of that individual's ability to contribute to the advancement of the radio art," the FCC said.

Besides drastically streamlining the Amateur Radio licensing process, the FCC said its actions would "eliminate unnecessary requirements that may discourage or limit individuals from becoming trained operators, technicians, and electronic experts."

Although no new Novice and Advanced licenses will be issued after the effective date of the Report and Order, the FCC does not plan to automatically upgrade any existing license privileges. The ARRL had proposed a one-time across-the-board upgrading of current Novice and Tech Plus licensees to General class, but the FCC declined to adopt the idea. This means that current licensees will retain their current operating privileges, including access to various modes and subbands, and will be able to renew their licenses indefinitely.

Starting April 15, 2000, individuals who qualified for the Technician class license prior to March 21, 1987, will be able to upgrade to General class by providing documentary proof to a Volunteer Examiner Coordinator, paying an application fee, and completing FCC Form 605.

The FCC's decision not to automatically upgrade Novice and Tech Plus licensees means the current Novice/Tech Plus HF subbands will remain and not be "refarmed" to higher class licensees as the ARRL had proposed. The FCC said it did not refarm these subbands because there was "no consensus" within the amateur community as to what to do with them.

As it had proposed earlier, the FCC decided to lump Technician and Tech Plus licensees into a single licensee database, all designated as "Technician" licensees. Those who can document having passed the 5 WPM Morse code examination will continue to have the current Tech Plus HF privileges. "If

documentation is needed to verify whether a licensee has passed a telegraphy examination, we may request the documentation from that licensee or the VECs," the FCC said.

In addition to reducing the number of license classes from six to three and eliminating the 20 and 13 WPM code tests, the FCC also will reduce the number of written examination elements from five to three, authorize Advanced Class hams to prepare and administer General class examinations, and eliminate Radio Amateur Civil Emergency Service (RACES) station licenses. RACES will remain, however. "After review of the record, we conclude that we should eliminate RACES station licenses because RACES station licenses are unnecessary for amateur stations and amateur service licenses to provide emergency communications," the FCC said.

Under the new licensing scheme, there will be four examination elements. Element 1 will be the 5 WPM Morse code exam. Element 2 will be a 35-question written test to obtain a Technician license; Element 3 will be a 35-question written test to obtain a General license, and Element 4 will be a 50-question written test for the Amateur Extra license. The FCC has left it in the hands of the National Conference of VECs Question Pool Committee to determine the specific mix and makeup of written examination questions. Current Amateur Radio study materials remain valid at least until the new rules become effective in April.

The FCC's new licensing plan means someone will be able to become a ham by passing a single 35-question written examination. The plan also simplifies and shortens the upgrade path from the ground floor through Amateur Extra--especially since amateurs will only have to pass one Morse code test.

Elimination of the 13 and 20 WPM Morse requirements also means an end to physician certification waivers for applicants claiming an inability to pass the Morse code examination due to physical handicap.

The effective date provides a window of upgrade opportunity for current Advanced licensees. Between now and April 15, current Advanced holders may take the existing Element 4B, a 40-question test, giving them credit for having passed the current Extra written examination. Likewise, holders of a Certificate of Successful Completion of Examination (CSCE) for Elements 3B or 4B dated on or after April 17, 1999, will be able to qualify for General or Amateur Extra respectively when the new rules go into effect on April 15, 2000.

The FCC disagreed with the League's suggestion that it undertake a restructuring of operating privileges along with licensing restructuring. "We believe that in light of ongoing discussions concerning implementation of new and more modern communications technologies within the amateur service community, we should accord the amateur service community an opportunity to complete such discussions and possibly reach a consensus regarding implementation of new technologies before we undertake a comprehensive restructuring of the amateur service operating privileges and frequencies," the FCC said in its Report and Order.

In its amendments to Part 97, the FCC's Report and Order refers to a "Club Station Call Sign Administrator," something that does not exist under the current rules and which was not explained in the R&O itself. An FCC spokesperson said the Commission plans to issue a Public Notice soon to explain the program and to solicit qualified entities to serve as call sign administrators for club station applications.

A copy of the entire Report and Order (FCC 99-412) is available at http://www.arrl.org/announce/regulatory/wt98-143ro.pdf or at http://www.fcc.gov/Daily_Releases/Daily_Business/1999/db991230/fcc99412.txt .

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Hear Amateur Radio News!
860-594-0384 or on the Web at
http://www.arrl.org/arrlletter/audio/
~~~~~~~~~~~~~~~~~~~~

Greg Jones, WD5IVD Austin, Texas

wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

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May 2000

Original source file: tapr-bb.0005
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/tapr-bb/tapr-bb.0005

1. [tapr-bb] Pack*BASH dinner at Dayton Hamvention 2000

From: Greg Jones <wd5ivd@tapr.org>
Date: Thu, 4 May 2000 14:28:25 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-81732-2000.05.04-14.34.40--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Dayton Activities

Attending the 2000 Dayton Hamvention? Then don't miss out on PACK*BASH!

What?
        An event for the digitally-inclined ham, featuring:
        * Buffet dinner
        * Keynote Address: "Amateur Radio and Submarine NR-1"
           by CDR Chas Richard, W4HFZ, USN
        * TAPR special interest group meetings
        * "Birds of a Feather" gatherings

When?
        Friday evening, May 19, 2000
        Doors open at 7:00 pm; dinner served at 7:30 pm
        Speaker and meetings after dinner

Where?
        NCR "Sugarcamp" Conference Center, 101 W. Schantz Ave. --
        South of downtown Dayton, just west of Main St. (Rt 48).
        Maps available on the TAPR web site (www.tapr.org) or at the
        TAPR booth.

How?
        Dinner requires advance registration and payment through TAPR.
        Tickets will be available at the TAPR booth on Friday, though
        we strongly encourage registration <before> Hamvention. The cost
        is $25.00 per person, tax and tip included.

        All amateurs are welcome to attend, enjoy the speaker, and
        particpate in the meetings, although only those purchasing a
dinner
        can eat.

        To register, contact:
        PACK*BASH
        c/o TAPR
        8987-309 E. Tanque Verde Road #337
        Tucson, AZ   85749-9399

        Phone: (940) 383-0000
        Fax: (940) 566-2544
        Internet: tapr@tapr.org

        Visa/Mastercard Accepted

Who?
        PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet
Radio,
        the national leader in digital communication -- and the Miami
        Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to
http://www.tapr.org/tapr/html/dayton.html, or send email to
tapr@tapr.org.
You can request information via packet radio at BASH@W8APR.#DAY.OH.USA.N
OAM.

--
John Ackermann   N8UR
Dayton, Ohio, USA
jra@febo.com -- http://www.febo.com

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

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July 2000

Original source file: tapr-bb.0007
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/tapr-bb/tapr-bb.0007

1. [tapr-bb] ARRL and TAPR 19th Annual Digital Communications Conference

From: Greg Jones <wd5ivd@tapr.org>
Date: Wed, 19 Jul 2000 10:53:49 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-97410-2000.07.19-11.05.32--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

ARRL and TAPR 19th Annual
Digital Communications Conference
September 22-24, 2000 - Orlando, Florida

For more information see: http://www.tapr.org/dcc

Information
Mark your calendar and start making plans to attend the year's premier event in digital communications. The 19th Annual ARRL and TAPR Digital Communications Conference will be held September 22-24, 2000, in Orlando, Florida - just minutes from the Orlando International Airport.

The ARRL and TAPR Digital Communications Conference is an international forum for radio amateurs in digital communications, networking, and related technologies to meet, publish their work, and present new ideas and techniques for discussion. Presenters and attendees will have the opportunity to exchange ideas and learn about recent hardware and software advances, theories, experimental results, and practical applications. The Digital Communications Conference is not just for the digital expert, but also for digitally oriented amateurs of all levels of experience.

A Conference for the Beginner as well
The conference is not just for the digital expert. As in years past an entire session strand with beginning, intermediate, and advanced presentations on selected topics in digital communications will be offered. Some of the topics will include: APRS, Satellite Communications, TCP/IP, Digital Radio, Spread Spectrum and other introductory topics. Come to the conference and hear these topics presented by the experts!

Area Attractions
The Orlando Florida area is famous for its attractions and vacation spots. Disney World, Universal Studios, and Sea World (just to name a few) are within 15 minutes of the hotel. Shuttle service from the hotel will be available for a small fee. Cape Canaveral and Cocoa Beach are a 30 minute drive East of the hotel.

Symposia, Seminars and Banquet
Two symposia/seminars will be held which allow those with additional time and interest to make the most of the Conference. For those who may have interest in just one symposium or seminar, registration for the conference is not required to attend these activities. This allows maximum flexibility for those who may want to participate during the Digital Communications Conference, but do not have an entire weekend to devote to the event.

The Fourth APRS National Symposium will be held on Friday and will be moderated by Steve Dimse, K4HG (the developer of javAPRS). It will likely include many APRS software authors, such as Bob Bruninga, WB4APR (the father ofAPRS), Keith Sproul, WU2Z, Mark Sproul, KB2ICI (the developers of MacAPRS and WinAPRS), Brent Hildebrand, KH2Z (the developer of APRSPLUS), Mike Musick, N0QBF (developer of PocketAPRS), and other nationally known APRS leaders. Join this group for the afternoon and evening for in-depth discussions and presentations on the current and future status of APRS. This is a unique opportunity to gain insight into this fast-growing digital aspect of amateur operations that combines computers, packet radio, and GPS (Global Positioning System).

On Saturday night the DCC Banquet will be held. A guest speaker will speak after the banquet and a prize drawing will top the evening. The Grand Prize is a Palm VII Personal Digital Assistant.

The Sunday morning seminar will be focused on PIC development,

design, and programming. This five-and-a-half hour seminar will focus on the things you need to know now in order to understand and begin to participate in PIC development.

Co-Hosts
The 2000 ARRL and TAPR Digital Communications Conference local co-hosts will be Lake Monroe Amateur Radio Society (http://www.qsl.net/lmars/),Orange County ARES/RACES(http://evcom.net/~jvoisin/ares.htm), Seminole County ARES/RACES (http://wwww.geocities.com/capecanaveral/launchpad/4773), and Orlando Amateur Radio Club(http://www.oarc.org/).

International Co-Hosts PRUG (Packet Radio User Group of Japan) will be the International co-host for a third year running. PRUG will be hosting an informal social Friday evening before their seminar and symposium is held. Visit http://www.prug.or.jp for more information about PRUG.

Call for Papers
Anyone interested in digital communications is invited to submit a paper for publication in the Conference Proceedings. Presentation at the Conference is not required for publication. Papers are due by August 7th, 2000, and should be submitted to

Maty Weinberg, ARRL
225 Main Street
Newington, CT 06111

or via the Internet to

   lweinberg@arrl.org

Information on paper submission guidelines are available on-line at

   http://www.tapr.org/dcc

Hotel
Conference presentations, meetings, and seminars will be held at the Orlando Airport Marriott. It is highly recommended that you book your room prior to arriving. A special DCC room rate of $89/single and $89/double per night has been blocked for 50 rooms and is available until September 1st, 2000. Once the 50 rooms have been reserved, room rates will increase. So be sure to book your rooms early! The hotel provides transportation to and from the Orlando International Airport. Please contact the hotel to arrange specific transportation needs.

Orlando Airport Marriott (conference hotel)
7499 Augusta Drive
Orlando, FL 32822
Phone 407-851-9000, Fax 407-857-6211
(http://marriotthotels.com/MCOAP/)

What you can expect at DCC 2000
- A full day of papers and breakouts for the beginner to the advanced
- Two seminars/symposiums
- The fifth annual Student Paper session.
- A banquet with Special Guest Speaker.
- Informal get-togethers throughout the weekend.
- TAPR Membership Meeting
- An event at which the most important new developments in amateur digital communications are announced.
- Digital 'movers and shakers' from all over the world in attendance.

There are few activities where your participation can be so much fun and important! What a great way to share and renew your enthusiasm for digital amateur radio! A get-together with colleagues and bringing each other up to date on your latest work -- all this, and more, for an unforgettable weekend of amateur radio and digital communications. We hope to see you at the ARRL and TAPR Digital Communications Conference on September 22-24, 2000!

Full information on the conference and hotel information can be obtained by contacting:

Tucson Amateur Packet Radio
Phone: (940) 383-0000.
Fax: (940) 566-2544
Email: tapr@tapr.org
Web: http://www.tapr.org

Registration Form
Contact the TAPR office by Phone 940-383-0000, Fax 940-566-2544, or
Internet: http://www.tapr.org and tapr@tapr.org to register or for
additional information.

Conference Registration includes: Conference Proceedings, Sessions,
Meetings, and Lunch on Saturday.

See http://www.tapr.org/dcc for an on-line registration form or
text form for mailing or faxing.

A registration packet will be mailed in September upon receipt of
registration form and payment.

Greg Jones, WD5IVD Austin, Texas
wd5ivd@tapr.org http://www.tapr.org/~wd5ivd

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To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

September 2000

Original source file: tapr-bb.0009
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/tapr-bb/tapr-bb.0009

1. [tapr-bb] TAPR Press Release

```
From: John Ackermann <jra@febo.com>
Date: Fri, 29 Sep 2000 13:17:50 -0400
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Cc: tapr-bb@lists.tapr.org, aprssig@lists.tapr.org, netsig@lists.tapr.org,
        bbssig@lists.tapr.org, picsig@lists.tapr.org, hfsig@lists.tapr.org,
        tacgps@lists.tapr.org, tapr-org@lists.tapr.org, htaprs@lists.tapr.org
Message-ID: <LYR818-111856-2000.09.29-12.52.31--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain
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FOR IMMEDIATE RELEASE

TAPR Elects Officers at 19th Annual Digital Communications Conference

John Ackermann, N8UR, was elected the new president of TAPR at the 19th ARRL/TAPR Digital Communications Conference held in Orlando September 21-24.

135 hams, including a dozen from outside the US, attended the annual event, which includes presentation of technical papers, hands-on demonstrations, and beginner's sessions. Over 100 people attended Friday afternoon's APRS seminar, and 70 were present for a technical symposium on programming PIC chips held Sunday morning.

Ackermann succeeds Greg Jones, WD5IVD, who had served as president since 1993, with Steve Bible, N7HPR, replacing Ackermann as vice president. Bob Hanson, N2GDE, will continue to serve as secretary, and Jim Neely, WA5LHS, remains treasurer. The elections were held at TAPR's annual board meeting, held in conjunction with the DCC.

"Greg Jones led TAPR through a period of growth and innovation," Ackermann said. "On his watch, we brought significant new products to market, including the DSP-93 digital signal processing unit, Totally Accurate Clock, and Mic-E and Pic-E data encoders. Greg also laid the groundwork for our Frequency Hopping Spread Spectrum Radio project. He guided us into the Internet age, along the way creating the TAPR SIG mailing lists that now handle thousands of messages per month. Greg is also responsible for our increased publishing activities. His retirement leaves a void in TAPR that will be hard to fill."

Ackermann said that his primary objective will be to ensure that TAPR remains on the cutting edge of radio technology, with a special emphasis on emerging concepts such as Software Defined Radios. He will also focus on increasing membership and optimizing the organization's management structure.

Ackermann (ex-AG9V), who lives in Dayton, Ohio, has served on the TAPR Board of Directors and as vice president since 1995. He was first licensed in 1974 and has helped build packet radio networks in Ohio and Wisconsin. Ackermann is active on APRS, runs a Linux-based Internet site at his home, and can occasionally be found on CW chasing DX.

Bible lives in Kingsland, Georgia, and has been a TAPR Board member since 1996. He was project manager for TAPR's Totally Accurate Clock (TAC-2), EVM Radio Interface, PIC Encoder, and DGPS Reference Station kits. Bible is leading TAPR's development of a road map to develop Software Defined Radio technology for amateur use.

In other news from the DCC:

* TAPR announced that it will be offering the "EasyTrak" satellite rotor and radio controller. This PIC-based unit will control azimuth and elevation rotors for satellite use, as well as tune popular radios for Doppler correction.

* PRUG, the Packet Radio Users Group of Japan, demonstrated the possibilities of low cost Internet-connected sensors and software mobile agent technology. PRUG also introduced the TINI-AMEDES, a Java based one-board computer with Ethernet interface which supports the Dallas Semiconductor 1-wire interface, and provided an update on their 2.4Ghz spread spectrum radio, which has been commercialized by Root, Inc.

* Geoffrey Dick, WA4IKQ, was winner of the grand prize awarded at the Saturday evening banquet. Geoff won a TM-D700 APRS-capable mobile radio

donated by Kenwood.

DCC 2001 will be held in Cincinnati, Ohio from September 21-23, 2001.
Conference coordinators will be Steve and Sheila Bible assisted by local
coordinator Hank Greeb, N8XX.

About TAPR
TAPR (officially, Tucson Amateur Packet Radio, Inc.) is a non-profit
research and development corporation dedicated to advancing amateur
radio through digital technology. It focuses on development of
hardware and software tools that enable ham radio operators to explore
leading edge technologies. Despite its name, TAPR is an international
organization with over 2000 members worldwide.

Contact information:
Telephone: (940) 383-0000
Email: tapr@tapr.org
Web: http://www.tapr.org

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

2. [tapr-bb] APRS Protocol Specification Version 1.0

From: John Ackermann <jra@febo.com>
Date: Thu, 31 Aug 2000 10:56:39 -0300
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-111861-2000.09.29-12.58.49--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

I'm happy (you don't know *how* happy) to announce that APRS Protocol
Specification Version 1.0 was approved by the APRS Working Group on
August 29, 2000 and has been made available for download at the Working
Group web page, http://www.tapr.org/tapr/html/Faprswg.html.

This Version 1.0 (technically, due to change control, version 1.0.1)
document is nearly 130 pages long and does a tremendous job documenting
the APRS protocol as used on the air in the summer of 2000. We should
all thank the Working Group members, and especially Ian Wade, G3NRW, the
Technical Editor who actually wrote the thing, for their hard work.
Although the process took far longer than anyone anticipated when we
started, I think the end result is definitely worth the wait.

Where do we go from here? Although this is an excellent document, it
almost certainly still contains errors, omissions, and ambiguities. In
addition, it reflects only the current protocol, and not any of the areas
in which the protocol might be extended. The WG members will be meeting
at the DCC in Orlando next month and electronically thereafter to put in
place a mechanism to deal with requested corrections and enhancements.
The WG Charter outlines a way to handle this, but experience has shown that
some modifications may be necessary for a workable process.

Also at the DCC and thereafter, the WG will consider adding new members.
Since its founding, several new authors have come on the scene, and two
of the original members have resigned. Any author of software or firmware
implementing the APRS protocol who wishes to join the WG should contact
me (jra@febo.com or n8ur@tapr.org) directly. Please -- we need to hear
directly from those interested in joining, so rather than writing to ask
that someone be considered, encourage that person to get in touch with me.
Also, please remember that the WG is not affiliated with TAPR. Membership
decisions will be made by the group, and I can't tell you now how many (if
any) new members will be added.

73,
John Ackermann   N8UR
Administrative Chair, APRS Working Group
jra@febo.com

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

February 2001

Original source file: tapr-bb.0102
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/tapr-bb/tapr-bb.0102

1. [tapr-bb] TAPR Press Release

From: John Ackermann N8UR <jra@febo.com>
Date: Sat, 10 Feb 2001 20:10:33 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Cc: tapr-bb@lists.tapr.org, aprssig@lists.tapr.org, netsig@lists.tapr.org,
bbssig@lists.tapr.org, picsig@lists.tapr.org, hfsig@lists.tapr.org,
tacgps@lists.tapr.org, tapr-org@lists.tapr.org, htaprs@lists.tapr.org
Message-ID: <LYR818-134374-2001.02.10-19.26.04--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

FOR IMMEDIATE RELEASE

February 10, 2001
TAPR APPOINTS NEW DIRECTORS, SECRETARY

Steve Stroh, N8GNJ, and Byon Garribrant, N6BG, have been appointed to the TAPR Board of Directors, and Guy Story, KC5GOI, has been appointed the organization's Secretary.

Steve Stroh is a long time member of TAPR. He lives in Woodinville, Washington, a suburb of Seattle, where he is a member of the Puget Sound Amateur Radio TCP/IP Group (also known as WetNET, the Washington Experimenter's TCP/IP Group) and MicroHAMs, the Microsoft Amateur Radio Club. Steve's major interests in Amateur Radio are digital modes and advanced wireless networking. Steve has been the manager of TAPR's "NetSig" special interest group for several years, and has also been active in TAPR's spread spectrum SIG.

Steve was recently named Digital Editor for CQ Amateur Radio Magazine and writes CQ's monthly Digital Wireless column. Professionally, he is a full-time Independent Technology Writer, focusing on Broadband Wireless Internet Access.

Steve will fill the remaining Board term of Greg Jones, WD5IVD, who previously announced his desire to resign from his TAPR offices after many years of service.

Byon Garribrant has been active in packet radio and transmitter hunting since he was licensed in 1990. He served as the Digital Communications Officer for Orange County RACES for 5 years, maintaining the group's packet BBS, and organizing digital communication exercises using packet message-passing software he created.

In 1998, Byon began actively working with TAPR as a member of the PIC-E design team, and published the firmware used in the PIC-E. He has also given presentations at the last three Digital Communication Conferences on PIC programming. Byon has created several PIC-based amateur radio devices, including the GST-1 and GST-2, which allow GPSs to be used with APRS, the TinyTrak, an inexpensive TNC replacement for an APRS tracker, and PicCon, a transmitter controller for T-Hunting. He sells these devices as kits from his home business, Byonics. He lives in Las Vegas, Nevada, with his wife, Lara, KD6AYO, and three children and works as a computer game programmer for Westwood Studios.

Byon will fill the remaining Board term of Barry McLarnon, VE3JF, who served TAPR as a Director and volunteer for many years. TAPR will miss Barry's technical knowledge and true ham spirit.

Guy Story was first licensed in 1994 and has been an active packet radio user since his first day as a ham. He operated a TCP/IP station using JNOS before becoming active in APRS in early 1997, when he also joined TAPR. As a TAPR member, he has been actively involved in the organization's APRS and spread spectrum activities. Guy is also the APRS Chairman and repeater control operator for the Denton County Amateur Radio Association and is an assistant emergency coordinator for Denton County ARES.

Guy lives in Denton, Texas and is an Electronics Technician in the area of EMC/EMI compliance for Interphase Corporation in Dallas.

Guy takes over as Secretary from Bob Hansen, N2GDE, who continues as a Director and as Editor of the Packet Status Register, TAPR's quarterly journal.

About TAPR
TAPR (officially, Tucson Amateur Packet Radio, Inc.) is a non-profit
research and development corporation dedicated to advancing amateur radio
through digital technology. It focuses on development of hardware and
software tools that enable ham radio operators to explore leading edge
technologies. Despite its name, TAPR is an international organization with
over 2000 members worldwide.

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Telephone: (940) 383-0000
Email: tapr@tapr.org
Web: http://www.tapr.org

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To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

April 2001

Original source file: tapr-bb.0104
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/tapr-bb/tapr-bb.0104

1. [tapr-bb] PACK*BASH at the 2001 Dayton Hamvention

From: John Ackermann N8UR <jra@febo.com>
Date: Mon, 23 Apr 2001 19:07:40 -0400
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-8760-2001.04.23-18.25.27--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Yes, there will be a PACK*BASH this year! Things were a bit uncertain for
a while as we just learned that our traditional site would not be available
this year. But we've found a very good alternative, and we invite you to
attend the 2001 PACK*BASH.

If you'd like to attend, please contact the TAPR office as described below.

What?
        An event for the digitally-inclined ham, featuring:
        * Buffet dinner
        * Keynote Address (Speaker to be named)
        * TAPR special interest group meetings
        * "Birds of a Feather" gatherings

When?
        Friday evening, May 18, 2001
        Doors open at 7:00 pm; dinner served at 7:30 pm
        Speaker and meetings after dinner

Where?
        *** NEW LOCATION ***
        The NCR "Sugarcamp" facility that we've used in the past is no
longer
        available. Instead, we'll be at Kohler's Banquet Center, 4548
        Presidential Way, Kettering (39 40.75N, 84 08.43W), just south of
        East David Road between Far Hills Ave. and Wilmingon Pike.
        Maps available on the TAPR web site (www.tapr.org) or at the
        TAPR booth.

How?
        Dinner requires advance registration and payment through TAPR.
        Tickets will be available at the TAPR booth on Friday, though
        we strongly encourage registration <before> Hamvention. The cost
        is $25.00 per person, tax and tip included.

        All amateurs are welcome to attend, enjoy the speaker, and
        particpate in the meetings, although only those purchasing a dinner
        can eat.

        To register, contact:
        PACK*BASH
        c/o TAPR
        8987-309 E. Tanque Verde Road #337
        Tucson, AZ   85749-9399

        Phone: (940) 383-0000
        Fax: (940) 566-2544
        Internet: tapr@tapr.org

        Visa/Mastercard Accepted

Who?
        PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet Radio,
        the national leader in digital communication -- and the Miami
        Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to
http://www.tapr.org/tapr/html/dayton.html, or send email to tapr@tapr.org.

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org

To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

May 2001

Original source file: tapr-bb.0105
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/tapr-bb/tapr-bb.0105

1. [tapr-bb] PACK*BASH Reminder

From: John Ackermann N8UR <jra@febo.com>
Date: Wed, 16 May 2001 14:37:33 -0400
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-13119-2001.05.16-13.56.54--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Just a reminder that there will be a PACK*BASH at this year's Hamvention.
The full blurb is below; the short story is that tickets will be available
at the TAPR booth on Friday up until about 2:30PM. There should be room
for everyone who wants to attend.

The speaker will be Steve Bible, N7HPR, talking about "What (and Why) You
Need to Know About Software Defined Radios".

Note that the location is changed from previous years; a map is available
at http://www.tapr.org/tapr/html/dayton.maps.html

Yes, there will be a PACK*BASH this year! Things were a bit uncertain for

a while as we just learned that our traditional site would not be
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pm
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        *** NEW LOCATION ***

        The NCR "Sugarcamp" facility that we've used in the past is no longer

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        Presidential Way, Kettering (39 40.75N, 84 08.43W), just south of
        East
David Road between Far Hills Ave. and Wilmington Pike.
        Maps available on
the TAPR web site (www.tapr.org) or at the
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How?

Dinner requires advance registration and payment through TAPR.
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        To register, contact:

        PACK*BASH
        c/o TAPR
        8987-309 E. Tanque Verde Road #337

Tucson, AZ   85749-9399

        Phone: (940) 383-0000
        Fax: (940)
566-2544
        Internet: tapr@tapr.org

        Visa/Mastercard Accepted

Who?
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        the national leader in digital communication -- and the
Miami
        Valley FM Association, Dayton's packet radio club.

For more
information (including maps), go to

http://www.tapr.org/tapr/html/dayton.html, or send email to tapr@tapr.org.

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July 2001

Original source file: tapr-bb.0107
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/tapr-bb/tapr-bb.0107

1. [tapr-bb] TAPR Offices Moving; Short Closure and New Phone Numbers

From: "John R. Ackermann" <jra@febo.com>
Date: Wed, 04 Jul 2001 18:25:44 -0400
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-22233-2001.07.04-18.00.22--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The TAPR offices will be moving a few miles from Denton to Richardson,
Texas. We'll be closing on July 26 for the move and re-opening on August
6. The Tucson mailing address will remain the same (it is a maildrop that
forwards to the real office address) but the phone numbers will change.
Effective August 6, they will be:

Voice: 972-671-TAPR (8277)
FAX: 972-671-8716

The office email address -- tapr@tapr.org -- will not change.

The move is occurring because Dorothy Jones, KA5DWR, our longtime Office
Manager, has decided to take a well-earned retirement. It would take a lot
of words to fully describe how much Dorothy has done for TAPR, and how much
we've all relied on her over the years, so I'll just say "Thanks!"

Our new office manager is Laura Koster (XYL of Board member John Koster,
W9DDD). Laura had a baptism of fire by handling the TAPR booth at the
Dayton Hamvention this year, and she did a great job. We're very happy to
have her on board, and we're sure that she will carry on Dorothy's goal of
providing great service to our members.

73,
John Ackermann   N8UR
President, TAPR
jra@febo.com -- n8ur@tapr.org

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

August 2001

Original source file: tapr-bb.0108
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/tapr-bb/tapr-bb.0108

1. [tapr-bb] Spring / Summer, 2001 issue of PSR is online!

From: "Steve Stroh" <steve@strohpub.com>
Date: Sun, 12 Aug 2001 15:36:22 -0700
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-29816-2001.08.13-19.36.11--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The Spring / Summer 2001 issue, Issue #81 of the PSR is online at
www.tapr.org/PSR/Summer-2001.pdf.

Stories in the Spring / Summer 2001:
President□s Corner
Version 7.6.0 of WXN Released
First Quarter 2001 Board Of Director Notes
APRS News And Commentary
$20 Atomic Clock At Wal-Mart
Packet Status Register Upcoming Issues
XNET Routing Philosophies and Implementations
ARRL Again Petitions FCC For Primary Allocation at 2300-2305 MHz
FCC Examines Additional Spectrum Bands To Support Advanced Wireless Services
Update on TAPR Frequency Hopping Spread Spectrum Radio
PC/Flexnet32
>From The Editor
20th Annual ARRL and TAPR Digital Communications Conference

Thanks,

Steve Stroh N8GNJ
Editor, TAPR Packet Status Register

--
Steve Stroh steve@strohpub.com 425-481-0600
Independent Technology Writer
Specializing in Broadband Wireless Internet Access
Focus on Broadband Wireless Internet Access newsletter -
http://www.strohpub.com/focus.htm

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To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

September 2001

Original source file: tapr-bb.0109
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/tapr-bb/tapr-bb.0109

1. [tapr-bb] DCC: Last chance for registration discount, and updated program info

From: John Ackermann N8UR <jra@febo.com>
Date: Fri, 07 Sep 2001 12:50:15 -0400
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-34731-2001.09.07-12.18.49--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The early registration discount for both the hotel room rate, and the
registration fee, expires on September 10, so you only have a couple more
days to get your reservations and registration made at the lowest price.
Registrations at the normal price will be available and at the door (of
course, hotel rooms will be subject to availability).

The DCC begins on Friday, September 20 and runs through Sunday, September
22. Full details are available at
http://www.tapr.org/tapr/html/Fdccconf.html.

A couple of updates on the program:

1. We're very happy that Anthony R. Curtis, Ph.D, K3RXK, will be our
speaker at the DCC banquet. Tony's presentation will be titled "40 Years
of Amateur Radio In Space: Where We've Been, Where We Are, and Where We're
Going."

2. We've confirmed that the Packet Radio Users Group (PRUG) of Tokyo,
Japan will be sponsoring a reception and talking about their latest
activities Friday evening. PRUG is really on the cutting edge of digital
radio, and their presentations are always fascinating.

3. We are also fortunate to have three great activities that focus on the
hardware and soldering-iron side of amateur radio:

        * On Saturday, Jay Craswell, W0VNE, will do an introductory program on
using
        CirCAD, a powerful schematic drawing/PCB layout program that's available
(in a
        slightly limited form) for ham use at no cost.

        * Also on Saturday, Ten-Tec's Gary Barbour, AC4DL, will be talking about
Software
        Defined Radio development at Ten-Tec.

        * Our "Sunday Seminar" will feature Dave Newkirk, W9VES, providing a
tutorial
        on using the Serenade SV RF design software; this is another professional
package
        with a free version available for ham use.

We hope to see you there!

John N8UR
President, TAPR
jra@febo.com -- n8ur@tapr.org

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

2. [tapr-bb] Correction to DCC Post

From: "John R. Ackermann" <jra@febo.com>
Date: Sat, 08 Sep 2001 20:22:57 -0400
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Cc: mvarbb@febo.com, tawg-list@tawg.org
Message-ID: <LYR818-34982-2001.09.08-19.52.59--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

In a previous email I incorrectly stated that the Circad schematic drawing
and PCB layout program is available for Ham use at no cost. I
misunderstood the relationship of the various versions.

There is a highly discounted version of the $995 Circad program available
at $295.   This $295 version is available to Licensed Ham/Amateur Radio

Operators only. Check out http://dover.5u.com/ for more info on the Ham
Discount.

There is a demo version of Circad downloadable at http://www.holophase.com;
although that version can be used to draw small schematics and PCBs, it's
not a replacement for the full program.

I want to apologize to Holophase and to Jay Craswell for improperly
describing the versions of Circad, and to you for any confusion this may
have caused.

73,
John N8UR
President, TAPR
jra@febo.com -- n8ur@tapr.org

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

3. [tapr-bb] Digital Communications Conference Still On

From: John Ackermann N8UR <jra@febo.com>
Date: Thu, 13 Sep 2001 17:24:05 -0400
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-35921-2001.09.13-16.51.44--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

With the tragic events of this week, we've had to seriously consider
whether it was still appropriate or feasible to hold the Digital
Communications Conference next weekend (Sept. 20-22) in Cincinnati.
Although we grieve with the whole world for the losses so many have
suffered, we believe it's important to show that terrorism will not succeed
in making us change our way of life.

So, the DCC will go on. We realize that in light of the circumstances,
some folks who have already registered may feel they cannot attend. If
that is the case, please contact the TAPR office (tapr@tapr.org) and we
will arrange a refund of your registration fee. If you are traveling to
the DCC, remember that things may still be somewhat disrupted next week,
and increased security precautions will certainly cause some airport
delays. Check with your airline early and often to make sure they haven't
changed your plans for you.

We realize that this year's DCC may well be smaller, and will certainly be
more somber, than in past years. But we think that going ahead is the
right thing to do, and we hope that you agree.

73,
John

John Ackermann   N8UR   jra@febo.com   http://www.febo.com
President, TAPR   n8ur@tapr.org   http://www.tapr.org

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

4. [tapr-bb] Digital Communications Conference -- Final Update

From: "John R. Ackermann" <jra@febo.com>
Date: Tue, 18 Sep 2001 19:32:34 -0400
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-37022-2001.09.18-19.00.05--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Well, the Digital Communications Conference is only a few days away. If
you can make your way to Cincinnati, Ohio this weekend (Sept. 21-22) we
invite you to attend the show -- registration is available at the door.
Full details, including the current schedule, are available at
http://www.tapr.org/dcc.

Here's a brief rundown; note that due to the tragic events of last week,
we've had to make some adjustments to the schedule.

Friday:

Registration Opens   9:00AM

APRS Forum   1:00 - 6:00PM

(The morning part of the Forum has been cancelled.)

PRUG Social — 7:00PM
(Come enjoy the hospitality and see the latest activities of the Packet Radio Users Group of Tokyo, Japan.)

Saturday:

Registration Opens — 7:15AM

Main Program — 8:00AM - 5:00PM
(There will be a mix of introductory sessions on new aspects of digital communication, as well as more advanced topics. We think there'll be something for everyone.)

TAPR Membership Meeting — 5:00PM

Banquet — 7:00PM
(Anthony Curtis, K3RXK will speak on "40 Years of Amateur Radio in Space.")

NOTE: We've regretfully had to cancel the Sunday Seminar. If you registered for it, please stop at the registration area or contact TAPR to arrange a refund.

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To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

February 2002

Original source file: tapr-bb.0202
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/tapr-bb/tapr-bb.0202

1. [tapr-bb] New PSR available on-line

```
From: "John R. Ackermann" <jra@febo.com>
Date: Sat, 16 Feb 2002 10:10:17 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-63419-2002.02.16-09.45.01--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

The Winter, 2002 issue of TAPR's journal, The Packet Status Register, is
now available on-line at http://www.tapr.org/tapr/html/Fpsr.html . Hope
you enjoy it!

73,
John N8UR

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

April 2002

Original source file: tapr-bb.0204
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/tapr-bb/tapr-bb.0204

1. [tapr-bb] 2002 Digital BASH at Dayton Hamvention

From: "John R. Ackermann" <jra@febo.com>
Date: Tue, 09 Apr 2002 18:17:11 -0400
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-73126-2002.04.09-17.58.17--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

Going to the Dayton Hamvention? Then plan to attend the annual Digital*BASH
sponsored by TAPR and the Miami Valley FM Association to be held on Friday,
May 17, 2002!

For reservations, please contact the TAPR office as described below.

What?
        An event for the digitally-inclined ham, featuring:
        * Buffet dinner (Prime Rib, Chicken, and Pasta)
        * Keynote Address (Speaker to be named)
        * TAPR special interest group meetings
        * "Birds of a Feather" gatherings

When?
        Friday evening, May 17, 2002
        Doors open at 7:00 pm; dinner served at 7:30 pm
        Speaker and meetings after dinner

Where?
        Kohler's Banquet Center, 4548 Presidential Way, Kettering
        (39 40.75N, 84 08.43W), about 6 miles SE of downtown Dayton --
        just off of East David Road. Detailed directions and maps are available
        on the TAPR web site (http://www.tapr.org/tapr/html/Fdayton.maps.html)
        or at the TAPR booth.

How?
        Dinner requires advance registration and payment through TAPR.
        Tickets will be available at the TAPR booth on Friday, though
        we strongly encourage registration <before> Hamvention. The cost
        is $25.00 per person, tax and tip included.

        All amateurs are welcome to attend, enjoy the speaker, and
        particpate in the meetings, although only those purchasing a dinner
        can eat.

        To register, contact:
        PACK*BASH
        c/o TAPR
        8987-309 E. Tanque Verde Road #337
        Tucson, AZ   85749-9399

        Phone: 972-671-TAPR (8277)
        Fax: 972-671-8716
        Internet: tapr@tapr.org

        Visa/Mastercard Accepted

Who?
        PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet Radio,
        the national leader in digital communication -- and the Miami
        Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to
http://www.tapr.org/tapr/html/dayton.html#packetbash, or send email to
tapr@tapr.org.

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

2. [tapr-bb] Digital BASH Update

From: John Ackermann N8UR <jra@febo.com>
Date: Wed, 24 Apr 2002 11:21:33 -0400
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-76161-2002.04.24-11.01.17--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

We're very happy to announce that Bdale Garbe, KB0G, will be the keynote speaker at the TAPR/MVFMA Digital BASH on Friday evening at Hamvention.

Bdale is one of the long-time "good guys" in the digital radio and amateur satellite worlds. He was in the middle of the early work on KA9Q's "NET" and "NOS" programs, pioneered megabit-rate packet radio, and in the satellite world was heavily involved in the RUDAK and AO-40 GPS experiments. Back in the Old Days, he was a board member and Vice President of TAPR, and remains one of TAPR's best friends. On a different front, Bdale was just elected as Debian Project Leader, so he now oversees one of the major Linux distributions -- and the one that is by far the most ham-friendly. Bdale works in the Linux development group at HP, and in his spare (?) time does VHF/UHF/microwave contesting and roaming.

Bdale's talk will blend all of these interests into an entertaining and informative presentation titled "From Bits in the Basement to Debian -- and Back Again".

You can find more information about the Digital BASH and TAPR's other Hamvention activities at http://www.tapr.org/tapr/dayton/.

See you there!

73,
John

John Ackermann N8UR jra@febo.com http://www.febo.com
President, TAPR n8ur@tapr.org http://www.tapr.org

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To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

May 2002

Original source file: tapr-bb.0205
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/tapr-bb/tapr-bb.0205

1. [tapr-bb] Spring _Packet_Status_Register_ Available Online

From: "John R. Ackermann" <jra@febo.com>
Date: Thu, 02 May 2002 20:26:04 -0400
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-77562-2002.05.02-20.07.55--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

As the subject says... the new issue of TAPR's journal, the
_Packet_Status_Register_, is now available online. You can go to
http://www.tapr.org/tapr/html/Fpsr.html, or obtain it via ftp from
ftp://ftp.tapr.org/psr/Spring_83_2002.pdf. You'll need Adobe Acrobat or
other PDF file reader to view the document.

Stan Horzepa, WA1LOU, has taken the reins as the PSR's editor, and I'd like
to thank him for his great work on this issue. Please send comments,
suggestions, or -- best of all -- articles to Stan at psr@tapr.org.

73,
John N8UR

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

August 2002

Original source file: tapr-bb.0208
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/tapr-bb/tapr-bb.0208

1. [tapr-bb] summer 2002 issue of Packet Status Register

```
From: John Ackermann   N8UR <jra@febo.com>
Date: Tue, 06 Aug 2002 20:30:24 -0400
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-93055-2002.08.06-20.09.32--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain
```

The summer 2002 issue of Packet Status Register (PSR) is now available at www.tapr.org.

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

November 2002

Original source file: tapr-bb.0211
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/tapr-bb/tapr-bb.0211

1. [tapr-bb] New Issue of Packet Status Register Available

From: John Ackermann N8UR <jra@febo.com>
Date: Tue, 05 Nov 2002 11:09:27 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-105714-2002.11.05-10.59.16--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The Autumn 2002 issue of TAPR's journal, the _Packet_Status_Register_, is
now available online.

You can download it, and past issues of PSR, from http://www.tapr.org/psr
or via FTP from ftp.tapr.org/psr. The issue name is "Autumn_85_2002.pdf".

73,
John N8UR

John Ackermann N8UR jra@febo.com http://www.febo.com
President, TAPR n8ur@tapr.org http://www.tapr.org

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February 2003

Original source file: tapr-bb.0302
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/tapr-bb/tapr-bb.0302

1. [tapr-bb] Winter 2003 Packet Status Register Available

From: John Ackermann N8UR <jra@febo.com>
Date: Wed, 05 Feb 2003 11:56:10 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-119067-2003.02.05-11.52.22--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

The Winter, 2003 issue of TAPR's journal, The Packet Status Register, is
available online at http://www.tapr.org/PSR.

Its contents include:

* New 802.11 E-List
* TAPR Project Policy
* OneTech ¹02 Technical Symposium
* Book Review: 802.11 Wireless Networks
* 3D Environments and Mars: A Follow-up from the 2002 DCC
* Extending Icom OPC-581 Extension Cables for Icom IC-706s
* Digital Radio Mondiale and Amateur Radio Implications
* 2003 in Connecticut

Enjoy!

73,
John

John Ackermann   N8UR   jra@febo.com   http://www.febo.com
President, TAPR   n8ur@tapr.org   http://www.tapr.org

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

March 2003

Original source file: tapr-bb.0303
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/tapr-bb/tapr-bb.0303

1. [tapr-bb] TAPR Monthly Update

From: John Ackermann N8UR <jra@febo.com>
Date: Sun, 02 Mar 2003 18:40:34 -0500
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
Message-ID: <LYR818-122839-2003.03.02-18.36.43--lyris.tapr-bb#tapr.org@lists.tapr.org>
Rendered body type: text/plain

(Sent on behalf of Darryl, VK2TDS, TAPR Membership Director -- mailto:
vk2tds@tapr.org)

People

TAPR Membership

Running TAPR takes resources, and as a non-profit organisation we rely
on members for part of our funding. If you support the work that TAPR is
doing, we would welcome your membership of the organisation. You can
join by clicking on http://www.tapr.org/tapr/html/orgf.html . We have
also been listening to members requesting that we support electronic
commerce. TAPR are currently testing the use of PayPal in association
with the current ordering system on the Web. We will post a message on
the WWW site as soon as this is available.

Until then you can still join. Just fill out the electronic form as
normal, and state in the comments that you want to pay with PayPal when
it is available.

Digital Communications Conference

This years DCC will take place at the Hartford/Windsor Marriott Airport
Hotel in Windsor, Connecticut, on the weekend of September 19-21, 2003.
The hotel is 6 miles south of Bradley International Airport (BDL) and 13
miles north of ARRL Headquarters in Newington. Information will soon be
available on http://www.tapr.org/tapr/html/conff.html. Until then you
can find more information in the PSR at
ftp://ftp.tapr.org/psr/Winter_86_2003.pdf

We will soon be issueing a call for papers for this event. Have a think
about what you want to write about and start planning your paper now. If
you are unable to come up with a subject, it is often possible to find
friends with something to write about, but who don't have the time. You
can help your friend and the Ham community by writing the paper on their
behalf. There will be two popular discussion points at the conference -
Software Defined Radios and 802.11 networks.

DCC Conference Proceedings

We have also reduced the price of each of the proceedings of the DCC up
until 1997 to only US$6 each. This makes the a real bargain. We are also
making available sets of volume 1-10 and 11-16 available for US33 each
- but please bear in mind that we no longer have copies of a number of
the proceedings so we cannot guarenttee that the sets will be complete.

Electronic Distribution of Packet Status Register (PSR) Magazine

Listening to members we have found that many people are concerned about
missing out on the PSR now that it has gone electronic. We recognise
this as an issue, and we have come up with a solution to make things a
bit easier in this digital age. We have created two mailing lists to
assist you with keeping up to date with the quarterly magazine. They are

PSR-Announce
PSR-PDF

PSR-Announce is designed to advise the availability of the PDF file for
download. We recognise that many people are on slow internet connections
at home, or in fact have to pay for their bandwidth. So we have created
a mailing list just to tell you when the magazine comes out, and to let
you know how to get it. You can subscribe by visiting

http://www.tapr.org/cgi-bin/lyris.pl?enter=psr-announce&text_mode=0

PSR-PDF is designed for people who have a faster internet connection, or who know that they will never get to read it unless it is sent directly to them. Since PSR often contains graphics, the file can be over one mByte. You can subscribe by clicking http://www.tapr.org/cgi-bin/lyris.pl?enter=psr-pdf&text_mode=0

802.11 Mailing List

Whilst we are on the subject of mailing list, TAPR have started a mailing list for 802.11 'Wireless Internet' operations. It seems that every community has a mailing list dedicated to 802.11. So how is the TAPR one different? It is dedicated to 802.11 use in ham radio. The list contains active members of the entire range of technical ability - from the most basic understanding of how radio works, to the deep internals of this equipment. Such a broad range that everyone is sure to fit in. You can join by visting http://www.tapr.org/cgi-bin/lyris.pl?enter=ham-80211&text_mode=0

GNUradio receives HDTV

Matt Etus and the other people at the GNUradio project have announced that they have managed to decode the HDTV data stream on their PC's and have published the source code online. This is an amazing feat by Matt and the team. They are not quite to the stage of real time HDTV decoding on a PC, but are close.

Write for PSR!!!

PSR needs articles, and we would love to publish lots more in the PSR magazine. PSR is a great place to publish articles on everything from local operating practices to deep technical papers. And since the last issue TAPR is now rewarding those people who are helping others by writing articles for the magazine. Following the last issue, six people had their memberships extended by three months. This is just a small thank you from us at TAPR to those people who help us out. More details on PSR can be found on www.tapr.org

Conclusion

I hope you have found this document informative and useful. TAPR is always looking for new things to do and how to improve what it is already doing. If you have any ideas or concerns, please email me on darryl@radio-active.net.au

Darryl

You are currently subscribed to tapr-bb as: lyris.tapr-bb@tapr.org
To unsubscribe send a blank email to leave-tapr-bb-818W@lists.tapr.org

April 2003

Original source file: tapr-bb.0304
Source: http://ftp.tapr.org/tapr_history/SIG_Archives/tapr-bb/tapr-bb.0304

1. [tapr-bb] Digital BASH at Hamvention

From: John Ackermann N8UR <jra@febo.com>
Date: Fri, 11 Apr 2003 16:40:06 -0400
To: "TAPR Announcement List" <tapr-bb@lists.tapr.org>
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Announcing the 2003 TAPR Digital BASH!

What?
        An event for the digitally-inclined ham, featuring:
        * Buffet dinner
        * Keynote Address: A Software Defined Radio for the Masses,
            by Gerald Youngblood, AC5OG
        * TAPR special interest group meetings
        * "Birds of a Feather" gatherings

When?
        Friday evening, May 16, 2003
        Doors open at 7:00 pm; dinner served at 7:30 pm
        Speaker and meetings after dinner

Where?
        Kohler's Banquet Center, 4548 Presidential Way, Kettering
        (39 40.75N, 84 08.43W), just south of East David Road between Far
        Hills Ave. and Wilmingon Pike. Maps available on the TAPR web site
        (http://www.tapr.org/tapr/dayton, follow the link at the bottom of the
page),
        or at the TAPR booth.

How?
        Dinner requires advance registration and payment through TAPR.
        Tickets will be available at the TAPR booth on Friday, though
        we strongly encourage registration <before> Hamvention. The
        cost is $25.00 per person, tax and tip included.

        All amateurs are welcome to attend, enjoy the speaker, and
        participate in the meetings, although only those purchasing a
        dinner can eat.

To register, contact:
        Digital BASH
        c/o TAPR
        8987-309 E. Tanque Verde Road #337
        Tucson, AZ   85749-9399
        Phone: 972-671-TAPR (8277)
        Fax: 972-671-8716
        Internet: tapr@tapr.org

        Visa/Mastercard Accepted

Who?
        PACK*BASH is co-sponsored by TAPR -- Tucson Amateur Packet
        Radio, the national leader in digital communication -- and the
        Miami Valley FM Association, Dayton's packet radio club.

For more information (including maps), go to
http://www.tapr.org/tapr/dayton,
 or send email to tapr@tapr.org.

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